JANUARY, 1953
50 Cents a Copy

Better FARMING METHODS

Business Magazine for Leaders Who TRAIN and ADVISE Farmers

IN THIS ISSUE:

1953 Fertilizer Outlook
What's New in Defoliants
Chemicals of the Future

AGRICULTURAL CHEMICALS ISSUE

Published Exclusively for: County Agents, Vo-Ag Teachers, Extension Specialists, Soil Conservationists and other Agricultural Leaders

WHY PENDISTRIN® SQUIBB TREATS MASTITIS

MORE EFFECTIVELY...

This cross-section shows how Squibb special ointment base disperses high-potency antibiotics in every part of treated quarter.

Recommend treating mastitis *at the first sign!*

Early treatment is highly important in mastitis control. Urge your dairymen to treat mastitis promptly—at the first symptom. Suggest that they keep a convenient "barn box" of 12 tubes of Pendistrin on hand—*for ready use.* Sold in drug stores.

SQUIBB *Special* OINTMENT BASE ASSURES

Thorough penetration

● *Prolonged action*

The special "carrying agent"—working hand-in-glove with high-potency antibiotics—makes Pendistrin a more effective treatment for mastitis.

This especially formulated ointment base melts quickly ... floats on the milk ... disperses thoroughly throughout the quarter ... reaches into the minute recesses of glandular tissue.

Antibiotics are released slowly ... remain active up to 48 hours ... attack organisms at the moment in their life cycle when most susceptible.

Each tube of Pendistrin contains 100,000 units of penicillin plus 100 mg. of dihydrostreptomycin—a highly potent combination. It is stable, non-irritating. Antibiotics are held in suspension—will not settle out.

Recommend early treatment of mastitis. Suggest dairymen keep a "barn box" of 12 tubes of Pendistrin on their barn shelves. Requires no refrigeration. Available at druggists.

For accurate diagnosis of mastitis, consult your veterinarian.

FREE FOLDERS *for your use!*

Helpful, authoritative facts on antibiotics, animal health, and nutrition ... and handy dairy breeding records! Get these valuable free aids ... for your desk or library, or to pass on to farmers:

- **Effective Control of Mastitis**
- **Vionate, a Mineral and Vitamin Supplement**
- **Afsillin and Afsillin with B_{12} for Chicks, Poults and Pigs**
- **Dairy Herd Breeding Records**

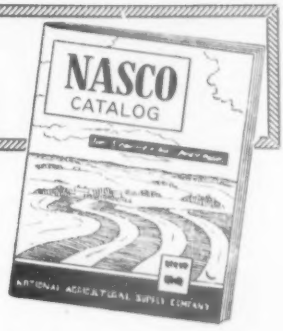
Write today! State number of each wanted. Address: E. R. Squibb & Sons, Veterinary and Animal Feeding Products Division, Dept. BFM-1, 745 Fifth Avenue, New York 22, N. Y.

PENDISTRIN is a trademark

SQUIBB—A NAME YOU CAN TRUST

HAVE A GOOD LOOK AT THIS BOOK

It will pay you in saved time and stretched budgets to start shopping and buying from NASCO'S big new catalog. 240 pages of money-saving, hard-to-get items you need in teaching and demonstration work. It's easy to shop . . . easy to order . . . and easy to pay when you shop the . . . NASCO way.



Every Soil Test Kit in Your County Means an Increase in Crops

We don't have to "sell" you on soil testing. You know the dramatic increase in farm production that soil testing can bring about—15% to 20% and 30% is not unusual; crops have often **doubled** and **trebled!**

Every SUDBURY KIT in your county answers the farmer's questions about pH and fertilizer requirements—gives you more time to devote to services the farmer can't perform for himself. Every KIT makes a good farmer a **better** farmer. And every KIT means definite crop increases—a better showing for you!

YOU MAY NOT KNOW THIS

SUDBURY has made soil testing so simple anyone can get perfect results with his first test. Testing soil the SUDBURY way is not only simple, it's fast. The SUDBURY KIT is light in weight, can be used out in the field or wherever most convenient. Takes but ten minutes—cost less than ten cents a test!

Spread the Gospel of Soil Testing!

There's no bigger favor you can do the farmers in your county. Soil testing will save them thousands of dollars in fertilizer now being wasted—thousands of dollars more in bigger and better crops.

HERE'S HOW TO DO IT

A **Sudbury Soil Test Kit** enables you to begin NOW bringing all the benefits of soil testing to every farmer in your community. Testiing his soil right in front of his eyes, is an effective way to prove what soil testing can do for him. And when he sees how simple and easy it is to test his own soil the **Sudbury Way**, he will want the economy and convenience of a soil test kit of his own.

VALUABLE TO YOU, TOO!

As a complete soil testing laboratory in itself, or as a portable auxiliary to a stationary laboratory, the **SUDBURY SOIL TEST KIT** is one of **your most useful tools. County Agents and extension workers can use them right in the field;** agricultural colleges and Vo-Ag schools find them highly instructive in the class room. Why not order a **Sudbury Soil Test Kit today!** Just fill in and mail the Order Blank below and we will send your Kit to you C.O.D. $29.95 plus postage.

SUPER DE LUXE Model

the ultimate of years of research and development by the World's largest Makers of Soil Testing Equipment. Despite its accuracy and reliability, it has been kept so simple that anyone who can read a newspaper can test his own soil. Tells whether nitrogen, phosphate or potash are needed, and how much. Shows whether lime is needed and how much (pH). Welded steel construction throughout to last a lifetime, yet light weight and easy to carry. Handsome grey finish. Comes completely equipped with enough supplies (refillable) for hundreds of tests. Scientific Charts included for 225 different crops. Price only

$29.95

COMPLETE

You may order from THIS AD.

New 1953 NASCO BOOK CATALOG Ready Jan. 1st

Save the time and bother of ordering books from a variety of publishers, and paying multiple invoices. Select from over 733 Ag book titles . . . the largest Ag book library in the world. Get the books you need in every category . . . books from Bee Culture to Vocational Planning. Order from a complete source . . . order from NASCO.

FREE DESK COPY PLUS 12% DISCOUNT

When you purchase 12 or more copies of the same title at one time you receive a bonus from NASCO . . . a free desk copy. You can choose from practically all recommended texts for your state on more than 26 different subjects. And you get a 12% discount on book orders of $25 or more.

GET OUR SPECIAL BOOK CATALOG

The new NASCO book catalog contains over 733 titles listed in an alphabetical index and also in an author's index for greater ordering convenience. The catalog contains nearly every agricultural book in the United States.

DIAMOND ROPE AND LEATHER HALTERS

Use for shipping, trucking, sales and general use. Made of one-half inch No. 1 grade sisal with a leather nose band and rope lead. Adjustable to any size. Lead is approximately 6 feet long.

C66 Diamond Rope Halters, each $.95
Dozen $10.95

ROPE LEADS

Not illustrated. One half inch No. 1 grade sisal with a metal snap.

C67 Rope Leads. Each ..... $.69
Dozen $6.95

ROPE HALTERS

Hand made. For training and showing. 13 feet best quality rope. 7-foot lead. Adjustable. Easy to put on. Club boys should lead calves by halter daily. Only halter broken calves should be shown.

C68 ½" rope halter, each ..... $.75
Dozen $7.20

FAMOUS HANSON DAIRY SCALES

Nasco sells thousands of these famous Hanson No. 60 lb.-two Revolution Dairy Scales each year. Second revolution indicates on draw bar, doubles the capacity of the scale. Constructed from heavy sheets of steel throughout, and equipped with heavy temperate steel springs and milled gravity rack. The fixed pointer can be adjusted by a set screw and the loose pointer by a thumb nut at the center. Each scale is finished in attractive and durable enamel and equipped with a hook. For the best buy, buy all of your scales from Nasco.

Each $5.19
12 or more @ $4.95

NATIONAL AGRICULTURAL SUPPLY COMPANY • Fort Atkinson, Wisconsin

Better FARMING METHODS

Business Magazine for Leaders
Who TRAIN and ADVISE Farmers

Published Exclusively for
COUNTY AGENTS, VO-AG TEACHERS,
EXTENSION SPECIALISTS,
SOIL CONSERVATIONISTS,
AND AGRICULTURAL LEADERS

Trade Mark 519,998 Reg. U.S. Pat. Off.
Established 1928—Subscription $2.00 per year
Member Controlled Circulation Audit

WATT PUBLISHING CO., MOUNT MORRIS, ILL.

Vol. 25 January, 1953 No. 1

Publication Staff

J. W. Watt.....Chairman of the Board
Leslie A. Watt.....President and Publisher
O. A. Hanke.....Vice Pres. and Ass't. Publisher
J. H. Flores.....Editorial Director
Herbert L. Schaller.....Editor
C. M. Hall.....Advertising Sales Manager
D. R. Witter.....Promotion Manager
Jack R. Shore.....Advertising Manager
Orval H. Cockrel.....Research Manager
Martin DeKoning.....Circulation Director
Mark Crawford.....Production Manager

BRANCH OFFICES

Hugh Thompson.....Eastern Advertising Manager
Watt Publishing Company, 347 Madison Avenue, New York 17, N.Y. Phone Murray Hall 3-1492.

H. K. Marcott.....Western Advertising Manager
Watt Publishing Co., P.O. Box 521, Palo Alto, Calif., Phone Davenport 3-5889.

ADVERTISING REPRESENTATIVES

Peck and Billingsley, 185 N. Wabash Avenue, Chicago 1, Ill. Phone Dearborn 2-0292.

McDonald-Thompson Co.:
San Francisco, Cal., 625 Market St., Phone YUkon 6-0647.
Los Angeles, Cal., 3727 W. 6th St., Phone DUnkirk 7-5391.
Seattle, Wash., Terminal Sales Bldg., Phone MAin 3860.
Portland 4, Ore., 115 S. W. 4th Ave., Phone Atwater 7401.
Denver, Colo., 222 Colorado National Bank Bldg.

Published monthly on the 1st of the month by Watt Publishing Co., Mount Morris, Ill. COMPANION PUBLICATIONS owned and published by the Watt Publishing Co.: Poultry Tribune, Hatchery and Feed, Turkey World, Pacific Poultryman, Broiler Growing, Poultry Processing and Marketing.

All rights preserved. Reproduction of any editorial matter is forbidden, except by special request.

Acceptance under Section 34:64 P.L.&R. Authorized.

Subscription prices: United States and possessions, $2.00 per year. Canada and Foreign, $3.00 per year. Single copies, January, March, and November issues, 50 cents each; all other issues 20 cents each. All subscriptions start with current issue. Make all remittances payable to BETTER FARMING METHODS. If you change your address, notify us direct and give both your old and new address when sending notification of change. Always state whether your subscription is new or renewal; please renew by the same name and initials. Printed in U.S.A.

Business Magazine for Leaders
Who Train and Advise Farmers

In This Issue

Washington News ..... *Fred Bailey* 6
Crop Defoliation With Chemicals ..... *L. E. Childers* 11
New Pesticides and Their Development ..... *Donald E. H. Frear* 14
4-H Club Agents Convention ..... *Durell Davis* 18
37th NACAA Convention ..... *Milton R. Dunk* 22
Plan National Soil Conservation Field Day ..... *Harold Severson* 26
With the County Agents ..... *Jay Partridge* 30
Insecticides Control Forage Pests ..... *R. W. Leiby* 34
The Fertilizer Outlook for 1953 ..... *Paul T. Truitt* 36
Are There Pesticides In Our Food Supply ..... *David C. Hall* 40
A Pictorial Review of Farm Sprayers and Dusters .... *Earl Anderson* 44
Greetings from the New NACAA President ..... *Leonard J. Kerr* 46
How To Appraise a Farm Management Program ..... *James Wallace* 48
County Agent No. 1—Triptolemus, A Greek Boy .. *Calvert Anderson* 52
Fifth NVATA Convention 54
Teacher's Farm Shop ..... *T. J. Wakeman* 58
Coming Events 60
Helpful Booklets 62
What's New in Agriculture 63
For What It's Worth ..... *H. L. Schaller* 66

ADVERTISERS' INDEX

Amer. Corriedale Assn.....51
Amer. Cyanamid Co.....12
Amer. Milking Shorthorn Soc.....52
Amer. Trucking Assn.....42
Assoc. Sales & Supply Co.....46

Bostrom-Brady Mfg. Co.....56
Briggs & Stratton Corp.....52
Brillion Iron Works.....49

Carver Pump Co.....57
Case Co., J. I.....15
Columbia Sheep Breeders.....60
Columbian Vise & Mfg. Co.....60

Dearborn Motors Corp.....31
Deere & Co., John.....19

Ferro Corp.....13
Fox River Tractor Co.....68
Fulton Bag & Cotton Mills.....60

Gehl Bros. Mfg. Co.....50
General Chemical Div.....41

Hale Fire Pump Co.....50
Hales & Hunter Co.....52
Hanson Chemical Co.....53, 60
Hercules Powder Co.....5
Hess & Clark Co., Dr.....20

International Harvester Co.....21
International Min. & Chm. Co.....18

Johns-Manville Corp.....47

Koppers Co., Inc.....57, 17

LaMotte Chemical Co.....53
Liquid-Petroleum Gas Co.....51

Mathieson Chemical Co.....10
Milwaukee Equipment Co.....53
Minneapolis Moline Co.....67

Natl. Ag. Supply Co.....3
National Farm Book Co.....56
National Rain Bird Sales.....50
New Holland Machine Co.....25
New Idea Equipment Co.....32

Pacific Coast Borax Co.....45
Pfizer & Co., Chas.....27
Phillips Petroleum Co.....16

Record Haven.....56
Reynolds Metals Co.....8
Royster Guano Co., F. S.....38

Shell Chemical Co.....35
Sinclair Refining Co.....33
Spencer Chemical Co.....43
Squibb & Sons, E. R.....2
Standard Brands, Inc.....29
Stone Mt. Grit Co.....7
Swift & Co.....30

Tennessee Corp.....39
Tennessee Eastman Corp.....37
Thompson Chemical Co.....50
Thompson-Hayward Chemical Co.....61

U. S. Rubber Co.....28

Velsicol Corp.....24

White Co., David.....51
Wisconsin Alumni Research.....9
Wyeth, Inc.....26

ADVERTISING CLOSING DATE—Advertising copy and cuts should be in our hands not later than the fifth of the month preceding publication. Example: Advertising for February Better Farming Methods should be here by January 5. When proofs are desired, copy and cuts should reach us 10 days earlier than this date. Address all advertising mail to Better Farming Methods, Sandstone Building, Mount Morris, Ill.

TOXAPHENE kills INSECT PESTS

Toxaphene dusts or sprays are approved for the control of an increasing number of harmful insects. All those listed above are included in latest recommendations. For specific information on toxaphene (chlorinated camphene 67-69% Cl), write to the manufacturer . . .

Naval Stores Department HERCULES POWDER COMPANY *905 King St., Wilmington 99, Del.*

NX52-29

WASHINGTON NEWS

By Fred Bailey

Written Exclusively for Better Farming Methods

USDA TO EXPERIENCE SHAKE-UP—Little is sure and certain in this life, except death, taxes—and an early shakeup at USDA by the Department's next boss, Ezra Taft Benson.

This does not mean that present programs will be junked, or even changed soon. That will take new laws. Moreover, GOP leaders are on record with promises to continue much of what the Democrats have been doing.

Ezra T. Benson

What can be done is to alter ways that present programs are being carried out; to reorganize and coordinate USDA functions. Benson has wasted no time on getting at this job.

Before they had had time to brush up on his background, influential farm leaders of Republican persuasion had been called to Washington by the incoming Secretary to discuss USDA reorganization. Benson himself had talked things over with outgoing Secretary Charles Brannan; a management consultant firm had been engaged to study how the Department could be made to tick more efficiently.

LEADERS HEED HOOVER RECOMMENDATIONS—Watch the Hoover Commission recommendations of four years ago for clues on the direction to be taken by the new administration in USDA reorganization. Leaders on the Eisenhower team are generally sympathetic to the Hoover findings.

One of Eisenhower's committee of three named to study plans for improvements in the federal structure, Arthur S. Flemming, was a member of the Hoover Commission. Another of Ike's top reorganizers is his brother, Milton, president of Penn State.

Milton Eisenhower's presence assures that reorganization plans for USDA will be backed by experience with agriculture. Nelson Rockefeller, chairman of the group, has been closely associated with agricultural aspects of the Point Four program.

It's a good bet that USDA "deficiencies" noted by the Hoover Commission will be scrutinized closely by Ike's top reorganizers. Here are the main ones that can be used as a guide to possible future action by Secretary Benson.

(1) The Department, said the Hoover Commission, suffers from "overlap and duplication."

(2) "The Cooperative Extension Service . . . is being increasingly bypassed by several of the bureaus and agencies of the Department."

(3) Methods of handling funds "have the cumulative effect of obscuring bureau expenditures and of promoting waste."

PMA MAY TAKE A BACK SEAT—There is little doubt among observers in Washington that the Production Marketing Administration is to be the major victim of future USDA organization changes.

Plans being discussed would call for severing the direct lines now existing between Washington and PMA field people. Republicans long have charged that the agency "plays politics." In the Hoover Commission's proposed structure for USDA, there is no PMA.

Another probable goal of GOP reorganizers will be further consolidation of conservation work. Efforts are likely to be made to divest PMA of conservation payments now made through its Agricultural Conservation Program.

The present outlay of $250,000,000 annually for payments probably won't be greatly reduced even though another agency handles them. Southern lawmakers are to continue holding the balance of power on the Senate and House Agriculture committees—and most of them are strong for conservation benefits.

SCS TO GET MORE RESPONSIBILITY—Both the extension service and Soil Conservation Service are likely to be given more responsibility for conservation work at the expense of PMA. It is not likely that SCS will be absorbed by extension—at least very soon—as has been advertised.

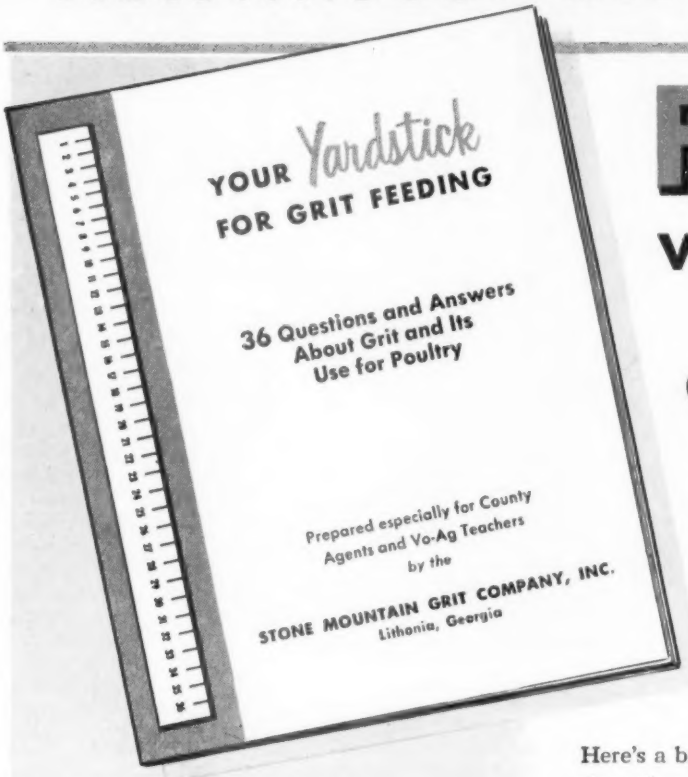
Consolidation of the two agencies, with extension top dog, is vigorously opposed by leaders of local Soil Conservation districts which receive technical help from the SCS. During the campaign, President-elect Eisenhower said:

"I strongly favor farmer-managed soil conservation districts with the Soil Conservation Service and other public agencies giving such help as farmers request."

It is worth recalling that Eisenhower issued that statement soon after a session with the president of the districts' national association, Waters S. Davis, Jr., Texas rancher.

Milton Eisenhower publicly called for absorption of SCS by extension more than a year ago, but there have since been signs that he regretted it. He did not

NEW!...JUST OFF THE PRESS!



FREE to VO-AG TEACHERS and COUNTY AGENTS

to help you answer your poultrymen's questions on GRIT!

CONTAINS ANSWERS TO THESE QUESTIONS—and many more!

- Why do chickens and turkeys need grit?
- Do birds naturally crave grit?
- Why should grit be of the right hardness?
- Why should grit be insoluble?
- How powerful is the gizzard?
- Why should grit have many grinding surfaces?
- How should grit be fed?
- How does insoluble granite grit help save feed?

Here's a brand new yardstick that will help you measure the value of grit to your poultry raisers.

"Your Yardstick for Grit Feeding" contains latest answers to the 36 questions most commonly asked about grit. Briefly and to-the-point, it tells why grit should be fed . . . how it should be fed . . . amount that should be fed.

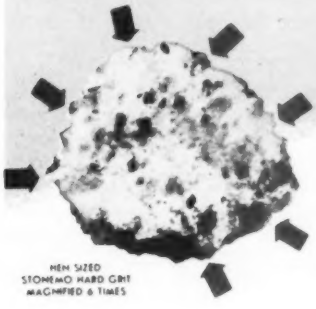
It gives you authoritative facts right at your fingertips which you can pass on to your poultrymen—farmers—students—4-H members. Facts they need to know to help step up feed efficiency . . . get more meat and eggs from every pound of feed . . . make greater profits!

This valuable treatise is free to vocational agriculture teachers and county agents. Get your copy. Ask for one for your assistant, too. Also for your library, if you'd like.

WRITE FOR YOUR COPIES TODAY

● Send a card or letter and ask for "Your Yardstick for Grit Feeding." State number wanted. Get this timely bulletin—while it lasts! Write today! Address Box BFM-1.

STONE MOUNTAIN GRIT COMPANY, INC.
Lithonia, Georgia



STONEMO the Grit with the "EXTRA GRINDING SURFACES"

THIS MAN CAN HELP, TOO

on PORTABLE SPRINKLER IRRIGATION SYSTEMS

There's another man in your community who, like you, wants to promote better farming methods. This man is ready to work with you and the farmers in your area to plan profitable sprinkler irrigation systems . . . practical systems that will help extend growing seasons and pasture feeding, improve crop quality, increase yields and protect against dry-spells.

Yes—like you, this man is familiar with local conditions. He's experienced in setting up portable sprinkler irrigation systems. He knows how to tailor these systems to meet the specific requirements of the farmers that you advise.

You know this man. Farmers know him. He's the dealer in your area who sells strong, lightweight, rustproof, Reynolds Aluminum Irrigation Pipe—the economical, efficient *lifeline* of portable sprinkler irrigation systems. Call on him or write Reynolds Metals Company, 2575 South Third Street, Louisville 1, Kentucky, for your copy of the booklet offered below.

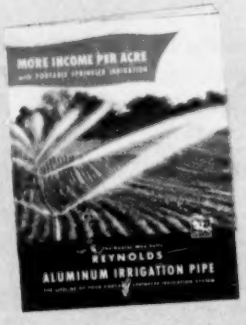
REYNOLDS ALUMINUM

REYNOLDS METALS

Member of Association of SPRINKLER IRRIGATION EQUIPMENT MANUFACTURERS

A.S.I.E.M.

Write for your copy of this free booklet on portable sprinkler irrigation systems



Reynolds Metals Company, 2575 S. Third St., Louisville 1, Ky.

Please send "More Income Per Acre," your new illustrated booklet on the application and advantages of portable sprinkler irrigation.

Name_____

R.F.D. or Street_____

Town_____ State_____

LIGHTWEIGHT ALUMINUM PIPE FOR PORTABLE SPRINKLER IRRIGATION SYSTEMS

know at the time that his renowned brother would be faced with the political realities involved.

BENSON IS AN INDIVIDUALIST—The phrase "frugal, individualistic, and resolutely religious" describes in brief the character of the next Agriculture Secretary. Although he has been a farm co-op leader, he believes "personal independence and initiative" must be maintained at all costs.

"Let cooperatives teach the youth of America that the world does not owe them a living," he says. "Nobody owes them anything for crops they don't grow, or goods they don't produce, or work they won't do."

His passion for individualism is reflected in his statement that "We must take a stand against undue governmental paternalism," and these additional words:

"Compared with the all-too-common philosophy that government should protect one from the cradle to the grave, the founders of this nation taught that 'that government is best which governs least'."

Benson was born in Whitney, Ida., on August 4, 1899. Since his birth, he has been steeped in the history and traditions of the Mormon church. His experience includes service as a county agent as well as state extension economist and marketing specialist in his native Idaho.

The Secretary-designate went to school at Utah state agricultural college, Brigham Young university, Iowa State, and the University of Southern California. He served in Washington from 1939 to 1944 as executive secretary of the National Council of Farmer Cooperatives. Since then he has been one of 12 apostles, or governors, of the Mormon church.

TEACHER TRAINING STANDARDS AIRED—A step toward clearing up the hitherto somewhat foggy subject of training standards for vo-ag teachers was taken in Washington recently by the Association of Land Grant Colleges and Universities.

A report containing suggested minimum standards was adopted at the Association convention here. The U. S. Office of Education is expected to urge their widespread use and adaptation by the states.

Past practice of rating training standards according to those of Land Grant institutions has led to confusion and wide differences among states. Aim of the authors of the new standards, say Land Grant leaders, was "to be specific and objective."—*End.*

Farmers Attend Soils School

Fifty New Haven county, Connecticut, farmers recently completed a two-day soils and fertilizer school to help plan present and future cropping systems for their farms. The first day was devoted to discussing, "What Is A Soil,' the second day to studying the "Managing and Fertilizing the Soil."

Basic information about liming soils and an explanation of what is in a fertilizer bag was discussed. B. A. Brown, agronomist, University of Connecticut, pointed out the need for commercial fertilizer when manure is not properly stored. "Extensive experiments show that in general a ton of manure produced by a dairy herd contains the same fertilizing elements as 100 pounds of 10-5-10. However, about 50 percent of the nitrogen, 30 percent of the phosphate and 97 percent of the potash are in liquid form and easily lost."

Brown indicated other reasons why barnyard manure does not measure up to its full value when he stated: "Often a large part of it is wasted before it is put on the fields. Nitrogen loss can be checked by putting phosphate in the manure gutters. Losses by leaching can be reduced by getting it on the land as quickly as possible."

This is the first attempt in several years in New Haven county to hold such classes and to review basic soil problems with the farmer. No school is complete without a quiz to help sharpen the thinking along soils and fertilizer lines. Loose-leaf notebooks, especially engraved for the New Haven county extension service, were distributed to the farmers to help them record their field notes when back on the farm.—*William B. Andrews, assistant county agent, New Haven, Conn.*

★

Charles D. Parker, vo-ag supervisor, Southwest Texas, is shown receiving a plaque from right, F. B. Wines, vo-ag teacher, Kingsville, Tex. On the left is Elton D. Ford, president, Vo-Ag Teachers' association, Texas. The lady in the picture is Mrs. Parker. Parker also received a leather travelling case by the teachers of vo-ag in his area. Presentation was made at the annual Future Farmer awards banquet held in Corpus Christi recently in recognition of his 17 years of leadership. Before being appointed supervisor, Parker served as teacher of vo-ag at Dilley, Tex.

will your group win an achievement award for controlling rats and mice?

ACHIEVEMENT AWARD
NAME OF YOUR GROUP
In recognition of outstanding service and leadership in helping to clear the community of rats and mice
WISCONSIN ALUMNI RESEARCH FOUNDATION

win a Gold Award—a Silver Award—or both

Right now is the ideal time to conduct your group's rat and mouse control achievement campaign. Set the campaign dates, appoint the necessary committees, and your community will soon join hundreds of others on the "rat-free" list.

For your leadership you'll receive the praise of your entire community. In addition, you'll win an achievement plaque in recognition of your well planned campaign. A Gold Award is presented when an organization, as a unit, encourages community participation in the campaign, using demonstrations, displays, and publicity. A Silver Award is presented when each member has conducted a rat control program on his own premises. Your group may win either or both awards.

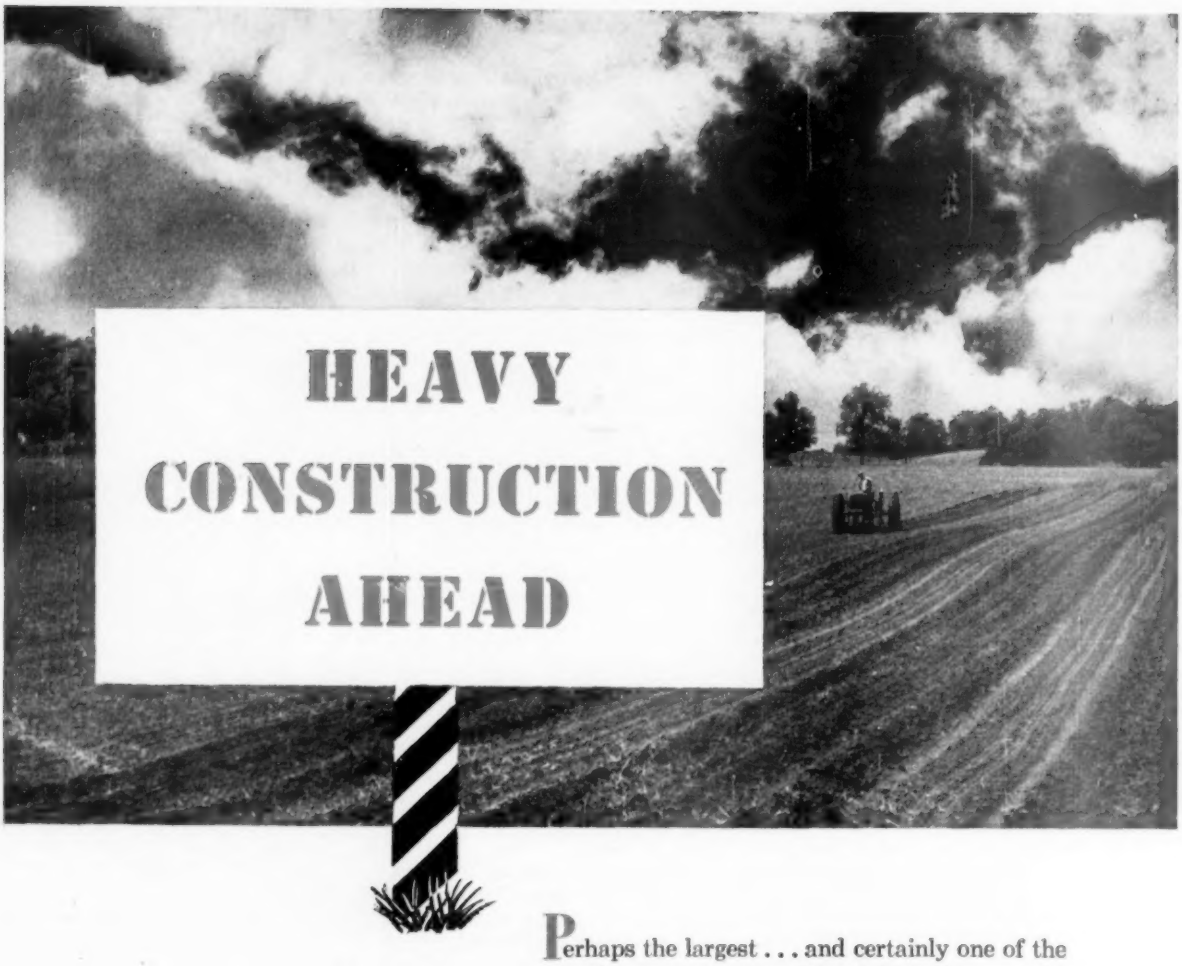
If you have already concluded your campaign, mail your Qualification Form and enclosures now. If you want to organize a campaign, complete an entry blank and mail it to the Foundation immediately. You'll receive all the information you need to be successful.

Send in your qualification form for consideration for an award.

WISCONSIN ALUMNI RESEARCH FOUNDATION

Send in your qualification form for consideration for an award.

WISCONSIN ALUMNI RESEARCH FOUNDATION
P. O. BOX 2059 • MADISON 1, WISCONSIN



Perhaps the largest . . . and certainly one of the most important construction jobs facing us today is the building of soil. Our farming land must not only maintain its high productive level—it must actually increase its yield if we are to meet the demands of a rapidly growing population.

The answer lies in an increasingly scientific approach to farming. Currently, production materials and tools—fertilizers, insecticides, herbicides and mechanical equipment—are showing constant improvement. What remains is the utilization of these materials and tools to the best advantage.

In cooperation with state and national agricultural authorities, Mathieson chemists, agronomists and engineers are working to contribute to even greater farm productivity . . . to help build better farms to assure a better future. Mathieson Agricultural Chemicals Company, division of Mathieson Chemical Corporation, P. O. Box 991, Little Rock, Arkansas.

SALES OFFICES: Houston 2, Texas; Little Rock, Arkansas; St. Louis 2, Missouri; Jackson, Mississippi; Phoenix, Arizona; Baltimore 3, Maryland; Williamston, North Carolina; Lebanon, Pennsylvania

1458

MATHIESON SERVING INDUSTRY, AGRICULTURE AND PUBLIC HEALTH

For Ag Leaders, A Review on . . .

Crop Defoliation With Chemicals

ABOVE: This is an eight-row duster in a Texas cotton field applying a defoliant. BELOW: This is the way a field of cotton looks after defoliation. Such chemicals are applied by airplane, sprayers, and dusters. The left insert shows hand picking, where defoliation is even of great benefit. The right insert pictures machine picking of cotton.

By L. E. Childers
U.S. Department of Agriculture

● TEN YEARS AGO crop defoliation with chemicals as a regular farm practice was practically unknown. In 1952, it had become a standard part of the harvesting routine on thousands of farms.

In cotton alone some estimates indicate that the total area treated with defoliating chemicals before harvest this past fall may add up to 5,000,000 acres or more. In 1951, the area treated has been estimated at 3,000,000 acres.

In addition to cotton, chemical defoliants or leaf desiccants have come into the harvesting picture or are being used experimentally on several other crops. Among these are potatoes, soybeans, rice, flax, and certain legumes for seed production.

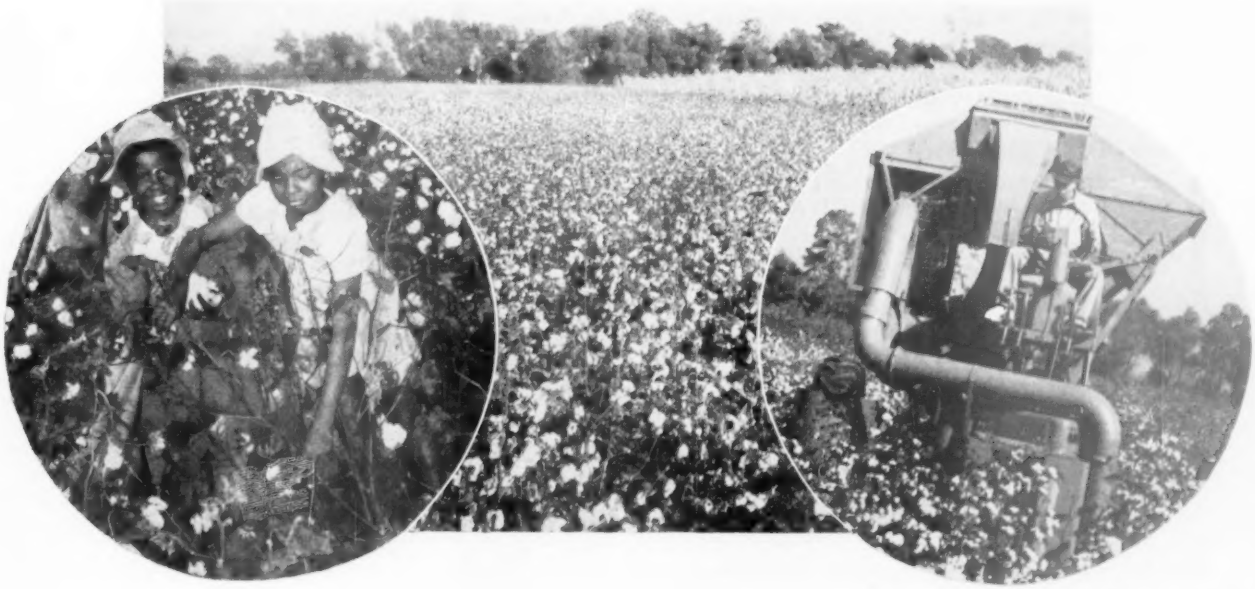
Ten Chemicals In Use

Ten chemicals are in use for defoliating cotton, two of them still somewhat experimental during the 1952 season. Defoliation guides of the Beltwide Cotton Defoliation conference list these chemicals and their defoliating characteristics.

Two of the chemicals are applied as dustss, the others as sprays. One of the dusts requires dew to be effective. The other requires active foliage but may be effective with only moderate humidity. They are:

Calcium Cyanamide: Must be dissolved on the leaf by dew, mists or other sources of prolonged moisture supply. Moisture-time requirement depends on plant condition. Has a broad dosage tolerance, is not highly sensitive to maturity, causes minimum tissue destruction, and requires fairly active foliage.

Monosodium Cyanamide (partially insoluble): A hygroscopic chemical which remains dry at low humidities. Becomes liquid on the leaf by drawing moisture from leaves, or from the air as humidity



You can depend on CYANAMID PRODUCTS

FOR INSECT CONTROL

THIOPHOS® Parathion Insecticides protect fruit, vegetable and field crops; control more types of insects on a broader range of crops than any other insecticide. Sold by national manufacturers under their own brand names.

FOR WEED CONTROL

AERO* Cyanate, Weedkiller applied as a spray kills weeds on contact in onions and other crops. Breaks down to compounds containing ammonia and potash. Relatively non-toxic to man and animals. Equipment easily cleaned with plain water.

FOR DEFOLIATION

AERO® Cyanamid, Special Grade defoliates cotton and soybeans; kills potato tops and tomato foliage to permit earlier, better harvests. Also effective in pre-emergence weed control in onions and for post-emergence weed control in canning peas and small grains. Supplies 21% nitrogen.

AERO* Sodium Cyanamid, Dust developed especially for cotton defoliation in semi-arid areas.

FOR FERTILIZATION

AERO® Cyanamid, Granular for weed control in tobacco plant beds and disease (sclerotiniose) control in certain vegetable crops. Ideal for direct application and to plow down with cover crops and stubble to make humus.

AEROPRILLS®, Fertilizer Grade Ammonium Nitrate contains 33.5% nitrogen, half in the quickly available nitrate form and half in the more slowly available ammonia form.

FOR SOIL-BUILDING

AERO-PHOS® Florida Natural Phosphate replenishes the natural phosphorus reserve in the soil. One application lasts for several years. Low in cost, easily applied in any season.

FOR RODENT CONTROL

CYANOGAS® A-Dust, the all around pest-killer for farm and garden. Kills ants, rats and other pests *right in their nests or burrows.*

*Trade-mark

WRITE FOR DESCRIPTIVE LITERATURE

AMERICAN Cyanamid COMPANY

AGRICULTURAL CHEMICALS DIVISION

32-E Rockefeller Plaza **New York 20, N. Y.**

Branch Offices : Brewster, Fla. • 3505 N. Kimball Ave., Chicago 18, Ill. 1308 Donaghey Bldg., Little Rock, Ark. • 111 Sutter St., San Francisco 4, Calif. P. O. Box 808, Winchester, Va. • 5025 Pattison Ave., St. Louis 10, Mo.

rises. Requires active foliage, has a broad dosage tolerance, and causes little tissue destruction.

None of the sprays require dew and none is entirely dependent upon high humidity. They include:

Endothal: Has average dosage tolerance, causes average tissue destruction, and is not too dependent upon full maturity.

Monosodium Cyanamide (fully soluble): Requires active foliage, has an average to broad dosage tolerance and causes average tissue destruction.

Pentachlorophenol (in oil): Has very strong tissue action, usually causing cessation of further boll development at effective rates.

Potassium cyanate: Generally most effective for conditions of low foliage activity and full maturity. Causes average to strong tissue destruction.

Sodium chlorate with *sodium pentaborate:* Fairly sensitive to maturity and foliage activity. Average tissue destruction and average dosage tolerance. Sodium chlorate alone is not recommended because it is explosive when dried in the presence of organic matter. This inflammable tendency can be retarded if the sodium chlorate is mixed with at least equal parts sodium pentaborate prior to application. Other borate compounds are effective retardants but in different degree than the pentaborates.

Sodium monochloroacetate: Sensitive to full maturity. Average dosage tolerance with average to strong tissue destruction.

Sodium dichromate: One year's experience indicates average dosage tolerance, requirements for maturity, and foliage activity but fairly strong tissue destruction.

Magnesium chlorate, hexahydrate: Limited experience indicates average dosage tolerance and tissue destruction with average requirements for foliage activity and maturity.

Sodium ethyl xanthate: Limited experience indicates average to broad dosage tolerance and average to strong tissue destruction with average requirements for foliage activity and maturity.

New Chemicals Coming

Other chemicals may be coming into use for cotton defoliation in 1953. Scientists have been screening new materials as a part of their research during the 1952 season.

A major problem in using the defoliants continues to be proper timing. In this connection it has become increasingly apparent that the condition of the plant at the time of application is more responsible for the efficiency of leaf-fall than selection of the defoliant.

Scientists point out that all cotton plants shed their leaves when the bolls mature. Applying chemical defoliants speeds up the natural process. It doesn't

work on immature plants or on plants that have produced no bolls. And anything that slows up maturity, whether it is weather, insect damage or disease, delays the shedding of leaves and may prevent the treatment from working.

Some Damage Possible

The researchers say applying the defoliant before the bolls are fully mature reduces the oil and viability of the seed and damages the spinning value of the fiber; especially the top crop or last bolls to mature. Many growers may have to sacrifice maturity of the top crop to save the valuable lower bolls from rotting. Since cotton in any field doesn't mature uniformly, the grower's chief problem is to time the chemical treatment to get the highest yields of good quality lint and seed.

One new development in defoliation of cotton is removal of the lower leaves before normal defoliation for mechanical harvesting, which has been under experimental study. High-clearance rigs are used to direct liquid defoliants to the bottom one-third of the plants for prevention of boll rots in fields where the cotton growth is rank.

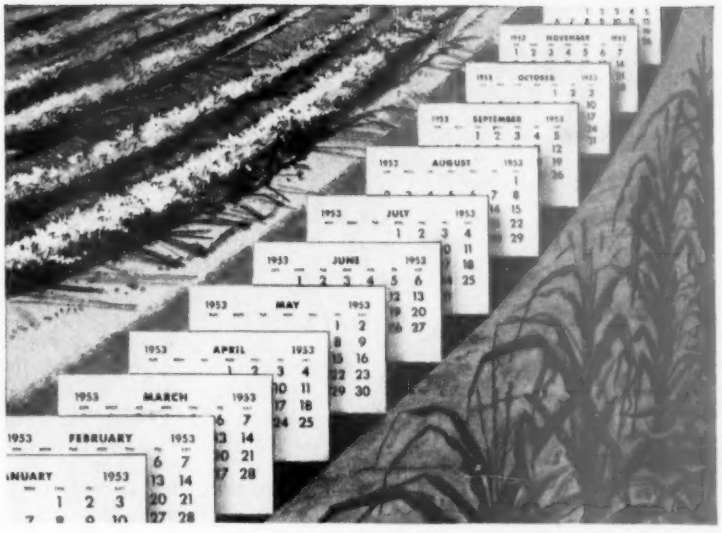
Preharvest defoliation or leaf desiccation practices are in less general use on most of the other crops than on cotton. Only a brief summary is possible:

Potatoes: Defoliation used to mature and ripen potatoes for timely harvesting. Usually a week to 10 days is required after application before harvesting can begin. Under certain conditions potatoes of treated plants sometimes discolor, similar to ringrot symptoms. Most commonly used defoliants or desiccants are dinitro ortho secondary butyl-phenol and calcium cyanamide. Sodium arsenite and sodium nitrate used to limited extent.

Soybeans: Preharvest application of weed killing and leaf desiccation chemicals is still experimental, but offers some advantages where grassy weeds and other green vegetation makes combining difficult. When chemicals are applied too early, bean yields and quality of oil may be reduced. Various materials have been tested. Pentachlorophenol is probably the most widely used.

Legumes: In California one-fourth of the alfalfa producing 24,000,000 pounds of seed was treated with preharvest sprays in 1951 and the practice is growing with other legume seed crops. Such seed crops ordinarily don't mature uniformly and are often subject to shattering when allowed to mature normally. Preharvest treatment gets rid of the dense foliage and aids drying.

Dinitro compounds in oil have generally been most effective. Combining is started as soon as the leaves are dry after such treatment. Among the crops treated in addition to alfalfa are ladino clover, alsike, and trefoil.—*End.*



NEW, SLOW-SOLUBLE F·T·E

is available to plants throughout growing season

A new way of putting the essential trace elements back into soils has been developed by agricultural science. Vital plant minerals can be introduced into your soil in a *slow-soluble* form called FTE (fritted trace elements).

FTE is a specially formed mineral containing a balanced proportion of iron, manganese, copper, zinc, boron and molybdenum.

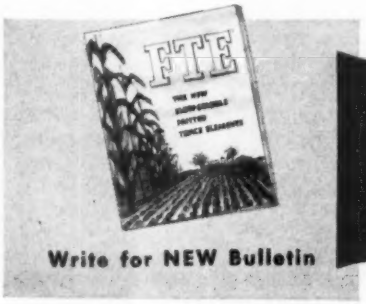
The new *slow-soluble* quality of FTE is of great economic importance to farmers and other commercial growers. FTE stays in the root area, constantly available to plants throughout the growing season. It does not dissolve out of the soil quickly and leave plants starved as is the case with ordinary soluble salts of trace elements. FTE usually requires only one application. It's also non-toxic, can't harm delicate root hairs.

Extensive research at experimental stations, universities and laboratories of the Ferro Corporation demonstrate the results possible in improved health and yield when the vital elements are available in this *slow-soluble* form. FTE used by farmers, truck gardeners, nurserymen has produced beneficial effects on vegetables, field crops, fruits, shrubbery and flowers.

HOW NEW FTE IS APPLIED

FTE, now available in 1-pound and 5-pound packages, can be applied separately or mixed with standard fertilizers. It should be worked into the soil in the plant root area. Normal application for flower and vegetable growth is about 1 pound per 400 square feet.

FTE will soon be available also as an additive in commercial fertilizers. Consult your local source of supply. Look for FTE on labels or bags. For name of your dealer, write Ferro Corporation, Cleveland 5, Ohio. In Canada, write Ferro Enamels (Canada) Ltd., Oakville, Ontario.



Write for NEW Bulletin

FERRO

F·T·E

(Fritted Trace Elements)

Trademark

A Brief Look At...

New Pesticides and Their Development

By Donald E. H. Frear
Pennsylvania State College

● DURING THE PAST decade scientists have been working around the clock to develop new chemicals for the control of pests. The success of the newer pesticides, such as DDT, lindane, parathion, 2,4-D, warfarin and others has stimulated the search for new and better chemicals to aid the modern farmer in producing more and better crops.

Some of the new pesticides are still in the laboratory stage, and must be studied further before they are announced to the general public. Others have gone through the preliminary testing processes, and will be available for limited or general use in 1953.

In this brief article I shall discuss how a new pesticide is developed and describe some of the more promising new pesticides which in all probability will be available for general use in 1953 and 1954. These are the materials about which you will be reading in your farm magazines and trade papers during the months to come.

Steps In Development

The development of any new pesticide is a slow and costly process. The public seldom understands or appreciates the amount of time and money spent by commercial manufacturers before such a product is marketed.

You may be interested in the various steps involved in the development of a new pesticide, which we will call "Compound X," manufactured by "Z" manufacturing company.

"Z" company maintains a large research staff of chemists, entomologists, plant pathologists, and other scientists. Depending on the size of the company, these may number from one to several hundred men.

Let us suppose that our hypothetical "Z" company employs 50 scientists. Of these, approximately 30 will be chemists, many of whom spend their time synthesizing new chemicals. They may produce 2,000 of these each year.

These new compounds are laboratory tested by entomologists and plant pathologists against several species of insects and fungi, and perhaps against plants or animals (if a herbicide or rodenticide is being developed). Of the original 2,000 compounds, approximately 20 will show some promise as a pesticide.

These 20 selected compounds are then synthesized in larger quantities and subjected to more extensive trials in greenhouses or in small field plots against specific insects, plant diseases, or other pests. At the same time toxicologists begin tests to determine the hazards of the new materials using laboratory animals. These various tests usually require from one to two years.

Some Show Promise

From the results of these more extensive tests, it may be determined that two of the 20 selected new compounds show promise for commercial use. The other 18 materials have been eliminated because they were not effective under practical conditions, or were too hazardous to use, or too costly to produce, or for some other practical reason.

The two compounds remaining in this elimination contest are now ready for the final large-scale tests. They are designated as compounds "X" and "Y". Quantities of several thousand pounds of each are prepared, and distributed for testing by collaborators in all sections of the country, under a wide variety of climatic conditions. Usually these tests involve several years' work, and the accumulation of hundreds of pages of data.

Best Compound Chosen

Compound "X" appears to perform well under all test conditions, but the results show that compound "Y" gave variable and sometimes unsatisfactory performance. Compound "Y" was therefore dropped from further consideration, and compound "X" was deemed worthy of commercial exploitation.

During the process of establishing compound "X" as a commercial pesticide, "Z manufacturing company" has spent approximately $300,000 and five years of research time, and has not sold one dollar's worth of the material. Such expenditures of time and money in the development of a new pesticide are commonplace, and not at all unusual.

It is not surprising for these reasons that new pesticides are not coming off the "assembly line" in large numbers. It is also obvious that the pesticide manufacturers are devoting a great part of their available facilities and capital outlay to the search for new compounds.

In the example given above, the manufacturer was fortunate in finding one satisfactory pesticide in 2,000 new compounds. Frequently not a single commercial product is found after testing an equal or larger group of materials. In such a case the manufacturer must write off the entire expenditure as a total loss and begin anew.

The increasing resistance of several insects to insecticides, as typified by the housefly in the past few years, has led to the development of many new insecticides. *Dilan* appears to have considerable promise as a residual fly control material.

Allethrin and *furethrin*, two synthetic materials related to the active principles of pyrethrum, probably will be used to a considerable extent in the next few years for fly control to supplement pyrethrum extracts. Being relatively non-toxic, these compounds can be used in nearly all applications without danger. They are formulated as space sprays and aerosols.

Develop Organic Compound

Following the discovery that tetraethyl pyrophosphate (TEPP) and parathion were extremely effective insecticides, a great deal of research effort has been directed toward finding new organic phosphorus compounds of insecticidal value. *Malathon* is one of these, reported to be effective on aphids, mites, and similar pests. *Sulfotepp* and *Paraoxon* are other members of this family which appear to have promise.

Two other related compounds, *Schradan* or *OMPA* and *Systox*, have the property of being absorbed by plants (systemic insecticides). These two compounds may change radically our methods of insecticide application, if they are successful.

Several new compounds related in a general way to chlordane and specifically to aldrin and dieldrin appear to have considerable merit, and we shall undoubtedly hear more about *isodrin* and *endrin*. They are highly toxic to a num-

When Does 1=4?

NEW CASE EDUCATIONAL MOVIE

Shows You!

Here is a four-way teaching impact! New movie with companion poster, study guide, and take-home booklet tell farmers and farm youth how to make *one* acre of renovated pasture pour out all the meat, milk, wool, and cash that four unimproved acres now produce. This new quartet of Case educational materials shows how to test and treat soils—renovate old sod—establish rich new growth—how to use for immediate and long-time high income. The movie is entitled "One Equals Four," and like all Case educational movies is 16 mm., in full color and sound. Non-commercial; runs 22 minutes. Film is loaned, printed matter furnished without charge to teachers, agricultural leaders, farm and civic clubs, other responsible persons and groups. Film loans should be requested as far ahead as possible, and alternate date specified if feasible.

60 EDUCATIONAL HELPS

As its contribution to a prosperous, enduring agriculture, the Case Company has prepared some sixty educational items all free to users. These include motion pictures, sound slide films, posters, study guides, booklets, and charts on a long list of subjects on conservation and other profitable farming practices. Be sure you have the latest Case visual education materials catalog, "Visual Aids to Modern Farming." It describes each item and tells how to order. Be sure to get your catalog and all materials through your nearest Case dealer or branch house. J. I. Case Co., Racine, Wis.

CASE

Phillips 66

Producing All the Nitrogen We Can!

Phillips is going all out to help make more nitrogen available, but even our tremendous production isn't enough for today's needs. As an agricultural adviser, you can help by making present supplies go further . . . by advising farmers to plan their fertilizer needs now and place their orders early with their local fertilizer suppliers. Phillips Chemical Company produces three high nitrogen fertilizers for direct agricultural use: Phillips 66 Ammonium Sulfate (21% N), Phillips 66 Prilled Ammonium Nitrate (33% N) and Phillips 66 Agricultural Ammonia (82% N).

PHILLIPS CHEMICAL COMPANY
A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

FARMERS SHOULD BUY THEIR FERTILIZER NOW

To avoid the spring rush for the limited supplies of nitrogen fertilizer that will be available, farmers should buy now—whenever possible—for winter application or to store for use next spring.

Easy to store: Phillips 66 High Nitrogen fertilizers resist caking. Stack 5 to 7 bags high in dry shelter on dry wood floor or planks. Leave room between stacks. Stack away from outside walls. Keep livestock away.

Phillips 66 High Nitrogen Fertilizers

Phillips 66 Ammonium Sulfate and Prilled Ammonium Nitrate are free-flowing, easy to spread or drill. Phillips also produces Agricultural Ammonia (82% Nitrogen) for direct or irrigation application.

ber of different types of insects.

Two new fungicides which have been marketed in a limited way in 1952 appear to have a wide usefulness. *Manzate* is reported to be superior to certain other fungicides for disease of tomatoes and potatoes. *Captan* is useful in controlling diseases of apples, peaches, grapes, and other fruits and vegetables.

Develop Herbicides

New low-volatile esters of 2,4-D and 2,4,5-T are now becoming available. These will be superior to the older combinations inasmuch as they will be less likely to cause injury to crops in fields adjacent to treated areas.

Chloro IPC is said to be effective in controlling chickweed in alfalfa and other legumes. A new herbicide, CMU, is recommended for controlling weeds in driveways, factory, and railroad yards and in similar locations where complete eradication of all vegetation is desirable.

Search for Rodenticides

While warfarin is still one of the most satisfactory rodenticides ever devolped, continued research is under way on new products. One new product, *Tomorin*, related chemically to warfarin, has been announced. A water-soluble warfarin preparation, *warficide*, is also being tested extensively and will probably be available in the near future.

We can look forward to many new pesticides in the years to come. The resistance developed by a number of insects and the continuing challenge to produce increasing amounts of agricultural products are healthy stimulants to the scientists in this field to develop new and more efficient control chemicals.—*End.*

★

Nevada Reorganizes College of Agriculture

Teaching, research, and extension animal husbandry work are all conducted through a single department in the newly organized college of agriculture at the University of Nevada, according to Dean of Agriculture C. B. Hutchison.

The rancher, extension animal husbandman, and the county agent will be working with specialists in nutrition, physiology, genetics, and range management so Nevada ranchers can actually use their knowledge. Classes in animal husbandry will be taught by the specialists, and the results of their research will be available to students as well as to county agents and ranchers.

Specialists now available at Nevada in the animal husbandry field include disease and parasites, nutrition, physiology, animal breeding, and genetics. The Veterinary Science department has

been working with diseases and parasites through the county agents and the State Department of Agriculture for many years.

With the state's livestock industry primarily a range operation, the whole livestock program is built around the range and range management. The Department of Range Management and Agronomy has a strong voice in the operation and planning wherever range or range problems are concerned.

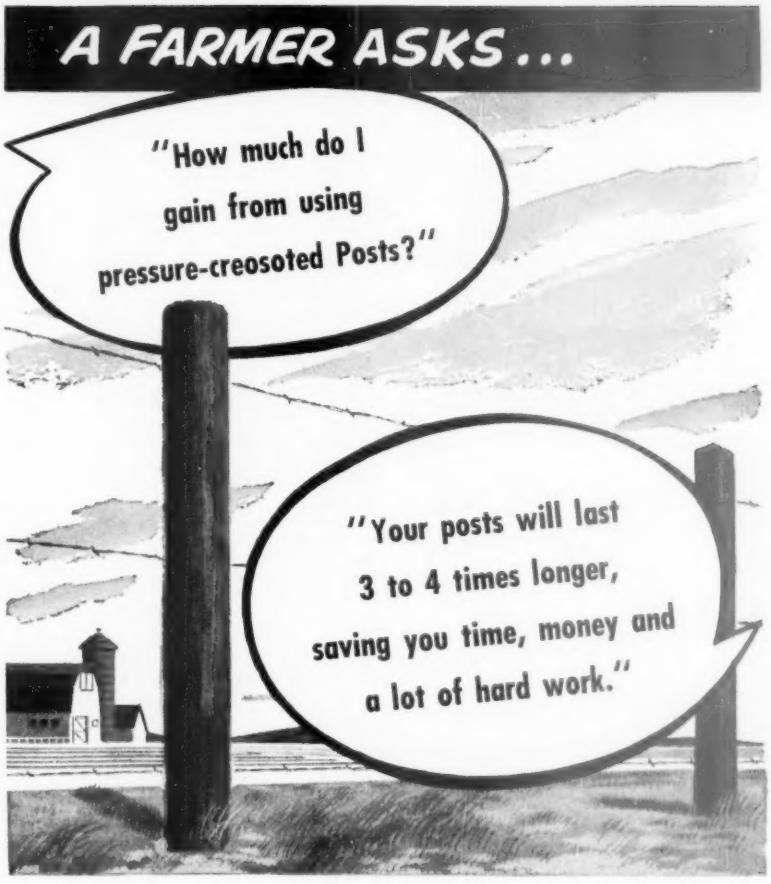
Extensive range research—new grasses, reseeding methods, range use surveys, and other problems are being conducted by the department.—*Gene F. Empey, extension editor, University of Nevada.*

★

Each year the National Committee on Boys and Girls Club Work, through a cooperative arrangement with the extension service of the United States Department of Agriculture, provides an opportunity for two former 4-H members to carry out a 10-month program of advanced educational training in Washington, D. C. Fellowship grants of $1,500 each are provided by the National committee. Winners this year are pictured above. At the left, William J. Kimball, county 4-H Club agent, Madison, Wis., and Rhonwyn Lowry, home demonstration agent, Adel, Ga. Standing between them is Guy L. Noble, director, National Committee on Boys and Girls Club Work and at the extreme right, Kenneth H. Anderson, associate director, National Committee.

★

Officers of the Michigan Association of 4-H Club Agents elected at the annual extension conference at Michigan State college talk over club business. They are, left to right, H. J. Hart, Howell, vice president; K. C. Festerling, Boyne City, president; and Fred C. Bernhardt, Escanaba, secretary-treasurer. (MSC photo)


A FARMER ASKS...
"How much do I gain from using pressure-creosoted Posts?"
"Your posts will last 3 to 4 times longer, saving you time, money and a lot of hard work."

FARMERS report that wood posts stay sound and usable for 30 and even 40 years when they are pressure-treated with creosote. Pressure-creosoting *completely* protects the wood from insects and fungi that cause decay. It makes the wood more resistant to burning . . . reduces the likelihood of a grass fire destroying a fence.

You're doing right by the farmers in your district if you always recommend pressure-creosoted fence posts. Remember . . . creosote is the *only* preservative that keeps wood sound and serviceable under severe conditions for more than 30 years!

KOPPERS COMPANY, INC., PITTSBURGH 19, PA.

Tar Products Division

DISTRICT OFFICES: Woodward, Ala. · Chicago, Ill., 122 S. Michigan Ave.
New York, N. Y., 350 Fifth Ave. · Boston, Mass., 250 Stuart Street
Los Angeles, Calif., 727 E. Gage Ave. · Pittsburgh, Pa., Koppers Building

For profitable production of their crops, farmers need

FERTILIZERS containing SOLUBLE MAGNESIUM

Sul-Po-Mag®
Water-Soluble
Double Sulfate of Potash-Magnesia

Growing crops need an adequate supply of magnesium to produce good quality and yield. Here's why.

- Magnesium is the basic metallic element in chlorophyll, the green plant substance which captures the sun's energy that is vital for life and growth.
- Magnesium concentrates in the seed with phosphorus to aid in the formation of oils and proteins required for viable seed.
- Magnesium functions as a carrier of phosphates to the actively growing and fruiting parts of the plant.
- Magnesium is required to activate the processes which stimulate the production and transport of carbohydrates and proteins within the growing plant.
- Magnesium, in sufficient quantities, enables the plant to utilize other plant nutrients for healthy, disease-resistant growth.
- Magnesium stimulates the growth of soil bacteria and increases the nitrogen-fixing power of legumes.

Experience shows that the most effective and economical way to supply the magnesium needed by growing plants is in soluble form in mixed fertilizers. *Sul-Po-Mag* is a properly balanced combination of *sulfate of magnesium* and *sulfate of potash*, water soluble and immediately available to the crop. Leading manufacturers are now including *Sul-Po-Mag* in their mixed fertilizers for the profitable production of a wide variety of crops.

potash division
INTERNATIONAL MINERALS & CHEMICAL CORPORATION
General Offices: 20 North Wacker Drive, Chicago 6

INCREASE CROP QUALITY AND YIELDS
Sul-Po-Mag
FREE
Write for FREE copy of this book

A group of 4-H Club agents are all ears as they listen to Mrs. Clara M. Oberg, of Minnesota, (extreme right), retiring president of the National Association of County 4-H Club Agents. Shown are (l-r) Cecil Eyestone, Kansas; Lloyd Strombeck, New York; Mel Avery, Michigan; Juanita Brown, West Virginia; Bill Davenport, New Jersey; Roger Leathers, Rhode Island; and Arlene Martin, Connecticut.

It Was Bigger Than Ever, the 1952 . . .

4-H Club Agents Convention

By Durell Davis

(Better Farming Methods' Photos)

● THE FOLKS WHO LEAD thousands of tomorrow's leaders—county 4-H Club agents—met in Chicago for their sixth annual convention November 30-December 4.

Although organized only six years ago, the National Association of County 4-H Club Agents, is firmly established. This year a total of 83 agents from many sections of the nation traveled to Chicago to take part in the five day convention.

Throughout the meeting the importance of training farm and home leaders for the future was emphasized. Examples of this leadership can be found in Catherine Cook, Norfolk county, Massachusetts, and Edward R. Wyeth, Bristol county, Massachusetts. Miss Cook now has 700 girls enrolled in home economics projects in her county. Many of her former club members are now serving as volunteer leaders in their respective communities.

Wyeth has been working with 4-H Club members for more than 32 years. During that time he has been responsible for making college educations possible, through scholarships and otherwise, for more than 100 young people.

For their leadership efforts Wyeth and Miss Cook received distinguished service awards. Others who received distinguished service awards at the convention were: Mrs. Clara M. Oberg, Ramsey county, Minn.; Otis A. Thompson, Norwich, N.Y.; Bruce R. Buchanan, Windham county, Vt.; Robert B. Ewing, Plymouth county, Mass.; J. Lloyd Glass, Gloucester county, N.J.; C. H. Hartley,

New officers of the National Association of County 4-H Club Agents lost no time in getting to work after they were installed at their convention in Chicago, November 30-December 4. New officers pictured above are: Seated—Juanita Brown, W. Va., sec.-treas.; and Bill Davenport, N. J., president. Standing, (l-r) Lloyd Strombeck, 1st vice-president; and Mel Avery, 2nd vice-president.

IF YOU WANT

FACTS!

. . . here are some worth talking about

People often ask if conservation farming pays and, if so, how much?

You can answer an emphatic "yes" to the first part of that question. As to the second part, there's plenty of "how much" evidence.* Take this sample:

> In Illinois they've studied the subject for years. All the farms studied showed a better net income after a good conservation program had been put into effect. Among a group of central Illinois farms, those where the best conservation practices were followed returned, as a 5-year average, $6.65 an acre more than similar farms where good soil management was not applied. On a 160-acre farm this extra net income would total more than $1,000 a year. Farms in other parts of the state showed similar gains from soil conservation practices.

Or take another example—on land that only a few years ago was eroded and worn down, but now has been built up through pasture improvement:

> A good grass-legume mixture produced 435 pounds of meat an acre. With beef or lamb at $28 per hundredweight, that's a gross income of $122 an acre.

A farmer can make money on production like that, and our American farms are full of similar stories—stories worth retelling and worth repeating right out **on the land.**

*All figures from published records.
Reprints of this message available on request.

JOHN DEERE • MOLINE • ILLINOIS

Science in the Barnyard

By DR. HESS

Some questions a research man would ask a cow can be answered about as well by a goat. Take our early work with udder infusions for treating mastitis: goats first told us that the right kind of oil was a better vehicle than water for carrying medication . . . less irritating to udder tissue. Because oil is retained longer in the milk cistern, medication is released slowly and the curative action prolonged. Cows then confirmed these goat-given answers, thus helping us develop a special non-irritating base for Dr. Hess Mastitis Ointment.

Four types of germs cause most mastitis trouble. Few farmers can tell which type is doing the dirty work, since all four (or even more) may have a hand in it. The medication that destroys one type of organism may not check another. To meet this problem, Dr. Hess Mastitis Ointment includes both penicillin and streptomycin. The level of penicillin is high, as we found that any less may result in penicillin-resistant organisms. Of course, with any mastitis treatment it's important to take action before a quarter or even an entire udder is lost—and before the disease spreads to other cows in the herd.

Udder trouble used to be fairly common in our Research Farm milking herd. But we've had much less since a few years ago, when we bought a 10-cent egg timer and began following the 3-minute managed milking method. This has cut down milking time too. Our cows are machine-milked under barn conditions similar to those on the average farm. When heifers freshen, they are started on 3-minute milking.

Mastitis germs can't fly, so they get from one udder to another by "hitch-hiking." That's why a cow with mastitis should be milked last. This and all other preventive practices are very important—but they can't kill infectious mastitis germs in a cow's udder. Only when udder treatments are part of the control program can mastitis be cleaned up in a practical way.

Our service bulletin on mastitis control contains many helpful suggestions, including details of 3-minute milking procedure. Copies in any quantity you want are yours for the writing.

© 1953

DR. HESS & CLARK, INC.
Ashland, Ohio
Scientific Farm-aceuticals Since 1893

state 4-H Club agent, W. Va.; and Willard G. Patton, Cheshire county, N.H. This brings the total number of awards made to 26 since the association was organized.

Outstanding speakers on the convention program included J. Earl Coke, extension director, University of California; E. W. Aiton, extension service, Washington, D. C.; R. B. Tootell, Montana extension director; Dr. Llewellyn Heard; and C. B. Wadleigh, New Hampshire state 4-H leader.

★

Bulletin On Insect Control

A new service bulletin entitled, "Insect Control on Crops, Shrubs, and Trees With Lindane," is available.

The bulletin lists in chart form the host plant, insects which may be controlled with lindane, the recommended concentrations and suggestions for application. Information is also given on seed treatment for wire worm control with a wettable powder containing 25 percent lindane, and on the possible use of lindane in transplanting or setting water, for cabbage maggot and tobacco wireworm control.

A copy of the bulletin may be obtained by writing to Pennsalt Chemicals, Agricultural Chemicals Department, 1000 Widener Building, Philadelphia 7, Pa.

New Crops Boost Yields

If the past 25 years is a measure of how plant research can help meet food needs of a growing population, this nation can look forward to hundreds of improved crop varieties producing much higher yields and better quality feeds and foods than those now grown.

In the past 25 years federal-state research has produced and released to farmers 293 new varieties of wheat, oats, and barley, 67 of sorghum, 25 of flax, 76 of various legumes, and 48 of grass. USDA, the state experiment stations, and commercial seed companies have released about 350 corn hybrids. These add up to a total of 859 new varieties of field crops during the period.

Today's improved varieties will help farmers meet production goals in 1952, but they will not do the job in 1977. While plant scientists are busy creating new crop varieties, nature is busy producing new diseases to attack them. Crop scientists still have too little information on what insects or diseases may appear if an entirely new variety becomes widely grown, or if farmers adopt a new farming practice.

A continuing research program is necessary to obtain basic information in breeding new varieties. These facts must be used to develop superior varieties resistant to the hazards of production. Once tested, the improved varieties must be increased and distributed and a pure source of seed maintained by crop improvement associations.

Better Farming Methods Wins Safety Award

Better Farming Methods was one of 14 winners in the annual National Safety Council's public interest award contest for exceptional service to safety on the farm. Better Farming Methods was cited for featuring farm safety in 9 of its 12 issues during the period August 1, 1951 to July 31, 1952. Of specific interest to the judges were the excellent articles on farm shop safety written by the Farm Shop editor of Better Farming Methods, T. J. Wakeman. In the picture above, back row, left to right, Ferdie Deering, Oklahoma Farmer Stockman; Bon D. Grussing, the M-M Merchandiser, Minneapolis-Moline Company; Paul Sanders, The Southern Planter; Earl McMinn, The Ohio Farmer; M. C. Gilpin, The Pennsylvania Farmer; and Harold Flores, editorial director, Better Farming Methods. Front row, left to right, Tom Leadley, The Nebraska Farmer; Ralph L. Foster, Capper's Farmer; Angeline Stanicek, Farm Implement News; Ned Dearborn, National Safety Council; Berry Akers, The Farmer; and Clyde Duncan, The Ranch and Farm World.

A report to you about men and machines that help maintain International Harvester leadership

IH ENGINEERS

cut equipment investment and farm work hours with this dual purpose

McCormick FIELD HARVESTER

High production costs and a shortage of manpower are problems farmers must solve to earn maximum profits. The new, large-capacity McCormick No. 20-C Field Harvester offers farmers who feed hay or silage a sound solution to both of these problems. IH engineers helped make this possible through research and product design.

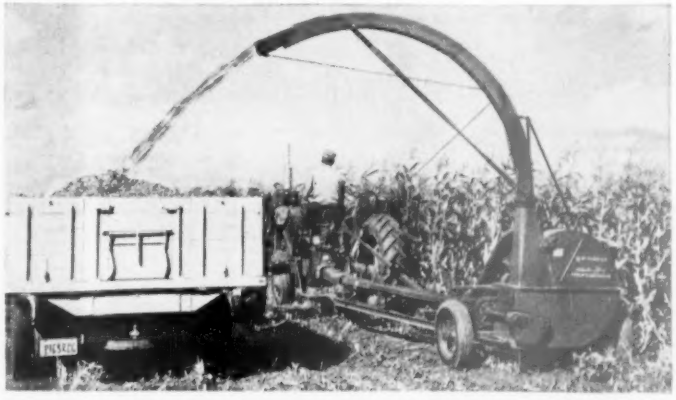
This dual-purpose machine, which harvests hay and row-crops by merely changing attachments, reduces the farmers' machine investment. One-man operation saves money by reducing the size of the harvest crew. A daily capacity of 250 tons—enough to fill three 14 x 28 silos—makes it possible to harvest crops at peak feeding value.

IH engineers provided such features in the new McCormick field harvester as the overrunning clutch which allows the flywheel to rotate freely when power is stopped. This clears out chopped material—saves time loss due to clogging. They also provided nine different lengths of cut to safeguard the storage and feeding quality of practically any crop.

These and many other IH engineering refinements help to make field harvesting of both forage and silage crops more *practical and profitable* for thousands of farmers.

Chops hay and grass silage. Pick-up hay attachment handles any windrowed crop such as green hay, cured hay, or straw.

Four-bolt fastening of pick-up and row-crop attachments makes it easy to adapt the harvester for either hay or row-crop work in 15 to 20 minutes.



Harvest standing row crops like corn, sorghum, or similar crops. Wide gathering sheets with low-riding points get *all* the crop.

IH engineering teamwork produced the big-capacity, dual-purpose McCormick field harvester. IH research, engineering, and manufacturing men are constantly pooling their time and talent to solve farm problems—to provide equipment that makes farm work easier and the farmer's time more productive!

INTERNATIONAL HARVESTER

International Harvester products pay for themselves in use—McCormick Farm Equipment and Farmall Tractors . . . Motor Trucks . . . Crawler Tractors and Power Units . . . Refrigerators and Freezers—General Office, Chicago 1, Illinois

Officers and directors of NACAA, front row (l-r): Joe Brown, Brockton, Mass., vice president; L. J. Kerr, Memphis, Tenn., president; Paul Barger, Waterloo, Ia., secretary-treasurer; Sherman Hoar, Sterling, Colo., member of executive committee. Back row (l-r): O. F. Walker, Kalkasha, Mich., vice director north central region; H. G. Seyforth, Ellsworth, Wis., director north central region; E. J. Johannesen, Emmett, Ida., director western region; R. H. McDougall, Butler, Pa., director northeast region, and L. V. Wilkins, Norfolk, Va., director southern region.

Full of Color, Successful too, the....

37th NACAA Convention

By Milton R. Dunk

● WHEN COUNTY AGENTS get together, they always have a good time. The annual convention of the National Association of County Agricultural Agents, which was held at the Edgewater Beach Hotel, Chicago, Ill., November 29-December 3, was no exception.

More than 600 people representing 43 states and three foreign countries took part in the activities in this thirty-seventh annual event.

From beginning to end, county agents and their guests enjoyed a well-planned program of activities. County agents made this convention very colorful. Many of the state delegations wore brilliant ties advertising their respective states. The Kentucky group attracted unusual attention with their black felt hats and black shoestring ties.

A number of state groups saw to it that no one lacked for food and drink during the convention sessions. The following were provided: Cheese from Wisconsin; cider from Kansas; peanuts from Alabama; popcorn from Iowa; orange juice from Florida: apples from Michigan; and pecans from Texas.

The convention was officially opened by Sherman Hoar, NACAA president. After the preliminary business of the association was taken care of, the agents heard an inspiring message presented by Herschel D. Newsom, master, National Grange, Washington, D. C.

The regional meetings were held on the first day of the convention, at which time two new regional directors and vice directors were elected.

County agents had an opportunity to review a new 16 mm. sound film on grassland farming entitled "Treasure Farm." This new film was produced by the Sinclair Refining Company and will be available for showing to farm groups.

Smoker Is Highlight

One of the highlights of the convention was the smoker. The entertainment was provided by the Sandard Oil Company (Indiana). The program included Paul Meeker and his orchestra, Kings Jesters, Dorothy Dorben Dancers, Gray Sisters, and Jack Herbert. Following this part of the program, county agents picked up souvenirs provided by various state delegations. The varied assortment of souvenirs actually included everything from "soup to nuts."

Breakfasts were sponsored by International Harvester Company, Firestone Tire and Rubber Company, and Dearborn Motors Corp. County agents and their wives also were luncheon guests of the Shell Chemical Corp.

Public Relations Discussed

William L. Nunn, director, university relations, University of Minnesota, gave an address on "The County Agent's Responsibilities in the Field of Public Relations." Nunn said that public relations is telling people about a good job that's well done. A panel of county agents also discussed the public relations problem.

One of the annual highlights of the county agents' convention is the past president's dinner. These men, all past presidents of the NACAA, were present. Back row, left to right, Sherman Hoar, Sterling, Colo.; John Henry Logan, Fairwater, Fla.; Rex Carter, Uniontown, Pa.; and Edwin Bay, Springfield, Ill. Seated, left to right, A. F. McDougall, Concord, Mass., and E. V. Ryall, Kenosha, Wis.

Fun at the NACAA . . .

Lots of fun at the county agent smoker. Here Robert Faulkner, Leitchfield, Ky., acting the role of a Kentucky Colonel, greets N. P. Hanson, Glenwood, Minn., one of the agents, who picked up souvenirs from the various state delegations.

Kansas county agents served 80 gallons of cider to help quench thirst during the convention. Here, left to right, are a group of the Kansas agents who helped out: Wilbur White, Hobart Frederick, Vernon Crippen, Brace Rowley, and Clarence A. Hollsworth.

Speakers at the opening session of the convention were accompanied by the sounds of popping corn and other distracting disturbances at the back of the room. Therefore, it was necessary to "swear in" a sergeant-of-arms and several deputies. Here, equipped with silver badges and all are, left to right, Garnet D. Best, Oregon; J. R. Chavez, New Mexico; Ira Goodell, Wisconsin; B. E. Henry, Michigan; C. M. Christy, Virginia; and John Cavender, Arkansas.

Above: These men discuss the 4-H program at one of the convention sessions. Seated, left to right, O. E. Mikesell, Albany, Ore.; R. H. McDougall, Butler, Pa.; Victor Carothers, St. Joseph, Mo.; Standing, Charles Overman, Edenton, N. C.; Landon C. Burns, Westminster, Md.

. . . and business too

These county agents discussed public relations. Front row, left to right, L. B. Wilkens, Virginia; Gale Peppers, South Dakota, and Kenneth Boyden, Massachusetts. Back row, left to right, Fletcher Farrington, Alabama, and Arvil D. Ashment, Wyoming.

State winners in grassland improvement sponsored by the National Fertilizer association. Front row, l-r: R. P. Hartman, Toms River, N. J.; J. B. Snipes, Pittsboro, N. C.; Stanley Bale, Mandan, N. D.; Carl West, Poteau, Okla.; Delbert Foster, Donnellson, Ia.; and J. M. Nicholes, Cody, Wyo. Back row, l-r: Dr. Russell Colmen, president, National Fertilizer association, Washington, D. C.; Harold Stevens, Lexington, Nebr.; Harold Larsen, Scottville, Mich.; Frank Jones, Linden, Ala.; O. P. Roberts, Joliet, Mont., and Vern Hendrickson, Alma, Wis.

CHLORDANE CONTROLS

Cattle Lice and Ticks

Chewing and blood-sucking cattle lice are the number one pest within the cattle industry, especially during winter months. Cattle ticks also cause extensive damage. These parasites weaken animals, check growth, cause weight loss, and reduce resistance to diseases. If the infestation is heavy, death of the animals may result. The build-up of cattle lice and ticks is greater during the winter, when the animals' coats are long and thick, and when the skin is relatively dry. Protection against these parasites is vitally important for the well-being of your herd.

Chlordane Recommended

Chlordane, long successful against soil, crop, and household insects, can be used with a high rate of effectiveness to control cattle parasites as well. If applied as recommended, Chlordane operates rapidly and safely to rid cattle of ticks and lice. Complete control may be obtained with one application. This one application controls both cattle lice and ticks, and remains residually effective up to two months. Early inspection of cattle is recommended to determine when the animals should be treated. Treatment in the fall, when only a few of the parasites are present, may prevent a seasonal build-up to enormous numbers.

Free Folder!

Complete information on recommended formulations and methods of applying Chlordane to control cattle lice and ticks is contained in this new folder. Just clip and mail the attached coupon.

VELSICOL

VELSICOL CORPORATION

330 East Grand Ave., Chicago 11, Ill.

Please send me_____copies of the Cattle Lice and Ticks folder.

Name_____

Address_____

Town_____ State_____

At the opening session of the convention, Edwin Bay, left, immediate past president of the association presents Sherman Hoar, president, with the convention gavel. L. J. Kerr, who was elected president at the convention, observes the ceremony.

"4-H Club Work in the Extension Program" was discussed by F. L. Ballard, director, Oregon extension service, and a panel of county agents.

Plaques were presented to the state winners in the grassland improvement program sponsored by the National Fertilizer association. Dr. Russell Coleman, president, National Fertilizer association, made the presentations.

At the annual banquet 93 distinguished service awards were presented by the awards committee with A. B. Jolley, Dallas, Tex., in charge. Following the banquet the Squanto initiation was held, with the Ohio agents in charge.

The 1953 officers of the NACAA are a grand group of fellows. They promise to give the association top leadership during the ensuing months. Top to bottom are L. J. Kerr, Memphis, Tenn., president; Joe Brown, Brockton, Mass., vice president; Paul Barger, Waterloo, Ia., secretary-treasurer; and Sherman Hoar, Sterling, Colo., past president and member of the executive committee.

Kerr Elected President

L. J. Kerr, new NACAA president, announced the following committee chairman for 1953.

Agricultural Planning, Ray Bender, Westport, N. Y.; *Association Policy,* A. F. MacDougall, Concord, Mass.; *Animal Industry,* Jack Tejada, Santa Rosa, N. M.; *4-H and Older Youth,* C. T. Hall, Olathe, Kansas, and M. E. Tascher, Morris, Ill.; *Distinguished Service,* A. B. Jolley, Dallas, Tex.; *Federal Agencies Relations,* E. G. Ifft, Franklin, Pa.; *Information,* Jay I. Partridge, Independence, Iowa; *Land Grant College,* E. V. Ryall, Kenosha, Wis., and Rex Carter, Uniontown, Pa.; *Marketing and Research,* M. E. Hill, Belzcni, Miss.; *Professional Improvement,* John H. Ewing, Jr., Greensburg, Ky.; *Public Relations,* LeRoy C. Wright, Baker, Oregon; *Retirement,* W. R. Lominick, Vicksburg, Miss.; *Rural Health and Safety,* R. E. Miller, Valdosta, Ga.; *Urban Planning,* D. L. Bornman, Baton Rouge, La.

Plans are already in the making for the 1953 convention which will be held in Philadelphia, Pa., October 11-15. The Benjamin Franklin Hotel has been selected as convention headquarters. Co-chairmen of the 1953 convention are Charles K. Hallowell, Philadelphia, Pa., and William F. Greenawalt, Doylestown, Pa. They plan that one day will be spent in visiting farms in Lancaster and Chester counties, Pennsylvania. It is tentatively planned that one day will be spent visiting Seebrook Farms in New Jersey.

The 1952 convention was adjourned after the official installation of the new officers.—*End.*

★

4-H Leader to Retire

Gertrude L. Warren, known to hundreds of thousands of 4-H Club boys and girls throughout the United States, Europe, and South America as a leader in an organization that now numbers more than 2,000,000 members, retired on December 19 from the Extension Service, U. S. Department of Agriculture. 4-H Club members, who range in age from 10 to 21 years, numbered only about 300,000 when she entered the department in 1917. 4-H alumni now total over 15,000,000.

Miss Warren was in charge of the organization of 4-H Club work in the Federal Extension Service, in which the department, the state land-grant colleges, and the counties participate. Thousands of voluntary, unpaid local adult leaders assist in 4-H Club work.

Why "First in Grassland Farming"?

Back in 1940, New Holland put on the market a machine which helped start a new trend in farming. This was the first one-man automatic baler to pick up hay from the windrow and package it in twine-tied bales.

This early baler gave farmers a chance to make the ideas of grassland farming really work. It offset the growing labor problem . . . made larger acreages of grass possible . . . helped the farmer put up hay rich in the proteins and vitamins agronomists knew were being lost.

Since then, grassland farming and hay baling have come up fast. And New Holland has kept ahead all the way. After the early machines came the Model "76" and then the famous "77" which is today the highest capacity, fastest selling baler on the market.

Nor has progress been confined to a single product. In the New Holland line, a powerful wire-tie baler, forage harvesters, forage blowers, tractor mowers, spreader-seeders—these and others meet the demands of modern mechanized grassland farming.

Slogans are easy to coin, often hard to back up. Facts from the past and present plus plans for the future give New Holland the right to say, "First in Grassland Farming."

The New Holland Machine Company, a subsidiary of The Sperry Corporation.

NEW HOLLAND

"First in Grassland Farming"

New Holland, Pa. · Minneapolis · Des Moines · Kansas City · Brantford, Ontario

"TRIBIOTIC* GIVES REAL PERFORMANCE IN MASTITIS CONTROL"

GRAND RAPIDS, MICH.—According to Ken Willard, you can't beat Wyeth's new Tribiotic Ointment in mastitis control. Ken has 60 head of registered Holstein cows on his 200 acre dairy farm here.

Recently Mr. Willard heard of the fine results other farmers were getting with Tribiotic and decided to give it a try on a cow that had a bad mastitis case, unresponsive to other treatments he had used.

Results were pretty wonderful. Ken says: "It took just two tubes of Tribiotic to get this case under control. I gave her a third tube for good measure, and since, there has been no recurrence. Tribiotic truly saved this almost hopeless case for me. It deserves full credit.

"Tribiotic is an economical treatment method," he says, "because you get action, and that's what we dairymen are looking for. Simple to use, Tribiotic is a real time-saver, and it's easy to keep on the farm without refrigeration. Cleanliness, plus prompt action with Tribiotic has helped me control mastitis mighty effectively," Ken concludes.

- Each one-pinch single dose tube of Tribiotic Ointment contains 100,000 units of penicillin together with the equivalent of 50 mg. dihydrostreptomycin base and 5,000 units of bacitracin. *Trademark

Wyeth ®

WYETH Philadelphia 2, Pa.

AVAILABLE in Canada as TRIOVET* from John Wyeth and Brother, Ltd., Walkerville, Ontario

CONSULT YOUR VETERINARIAN AS YOU WOULD YOUR PHYSICIAN

Soil Conservationists, County Agents Helped to . . .

Plan National Soil Conservation Field Day

By Harold Severson

● IF SOMEBODY ASKED you to handle the task of staging a demonstration of soil conservation practices in conjunction with the national plowing matches, what would be your reaction?

You might hesitate to accept it. Or, if you love adventure, you might decide to take it.

That was the proposition facing W. Marion Roberts, district soil conservationist, Rochester, Minn., back in October, 1951. He was informed the National Association of Soil Conservation Districts had accepted Minnesota's offer to stage the 1952 version of the national soil conservation days and plowing matches.

Roberts thought it over—and then accepted the job.

One of his friends asked him bluntly: "What are you going to get out of this?"

"Well," he said, "I'm employed as district conservationist for the Soil Conservation Service. It's my job to promote soil conservation and I figure this event will really help me. I'm hoping to enlist at least 500 more farmers as cooperators with their soil conservation districts. And it may impress upon at least that many city people that agriculture is working out a solution to this erosion problem."

The event was scheduled for September 5-6, 1952. With a full year in which to shape plans for the event, Roberts worked slowly and cautiously in picking key men for the 60 committees lined up to handle the various details.

It proved to be a terrific undertaking—a great deal more involved and complicated than most people suspected. First of all, it was necessary to form a corporation. A representative from each of the seven cooperating soil conservation districts was named to the board. Working with this group were the 60 committees divided among 11 sections.

As the coordinator or liaison man, Roberts was delegated the task of making certain each committee functioned and did the job it had been assigned.

Climax to the 1952 national soil conservation days and plowing matches in Dodge county, Minnesota, were speeches by Dwight Eisenhower and Adlai Stevenson who spoke from the same platform the same afternoon. Left to right: W. M. Roberts, Rochester, and General Eisenhower.

New Treatment and Prevention of Animal and Poultry Diseases with

Terramycin

New nationwide field tests prove that high levels of Terramycin in the feed provide effective antibiotic control of specific diseases of poultry, swine, calves, lambs and mink.

This is one of more than 500,000 baby chicks used in tests that proved the effectiveness of high levels of Terramycin in poultry feed for the control of disease. In addition to the controlled tests, this new development also proved to be a powerful weapon against the onslaught of disease in farm and commercial flocks in many parts of the country.

Use feeds containing high levels of Terramycin for treatment and prevention of disease.

POULTRY	Blue Comb, also known as Mud Fever, Non-specific Enteritis. *For prevention*, 40 grams of Terramycin per ton of feed. *For treatment*, 100 grams of Terramycin per ton. Aid in reducing mortality from Air Sac and Infectious Sinusitis, also known as Chronic Respiratory Disease: 100 to 150 grams of Terramycin per ton of feed—to be fed from the time of attack until marketing.	
SWINE	Infectious Scours Infectious Enteritis Necro	100 grams of Terramycin per ton of feed
LAMBS	Infectious Scours	
CALVES	Infectious Diarrhea, also known as Scours	
MINK	Infectious Enteritis	

Effective treatment of disease requires prompt and accurate diagnosis. Be sure to consult your veterinarian or poultry pathologist.

Response in treatment of Blue Comb within 24 hours.

Users report that birds treated with Terramycin for Blue Comb show improved appetites within 24 hours . . . ***even make weight gains within a 48-hour period!***

Terramycin is also effective in stopping the well-known tendency of Blue Comb and Mud Fever to spread rapidly to other birds on the premises. Growers report that they get full protection by feeding birds *high-level* Terramycin feeds at the onset of the disease.

Terramycin, the world-famous Pfizer antibiotic for stimulating extra growth, now offers poultry and livestock raisers new benefits in effective control of serious and costly diseases.

While lower levels of Terramycin deliver remarkable results in terms of faster growth, fortification of feeds with *high levels* of this antibiotic (10 to 20 times the nutritional level) tends to prevent specific, common diseases, halt the spread of contagion, and aid in the recovery of sick birds and animals.

When these diseases strike in your neighborhood, you can help prevent them on your farm by using high level *Terramycin feeds.*

When these diseases occur in your flocks or herds, you can speed the recovery of your birds and animals by using high level *Terramycin feeds.*

Feed manufacturers are now being supplied with complete information on the use of *high levels* of Terramycin in disease control, with recommendations as to the best ways to formulate *high levels* of Terramycin in their feeds.

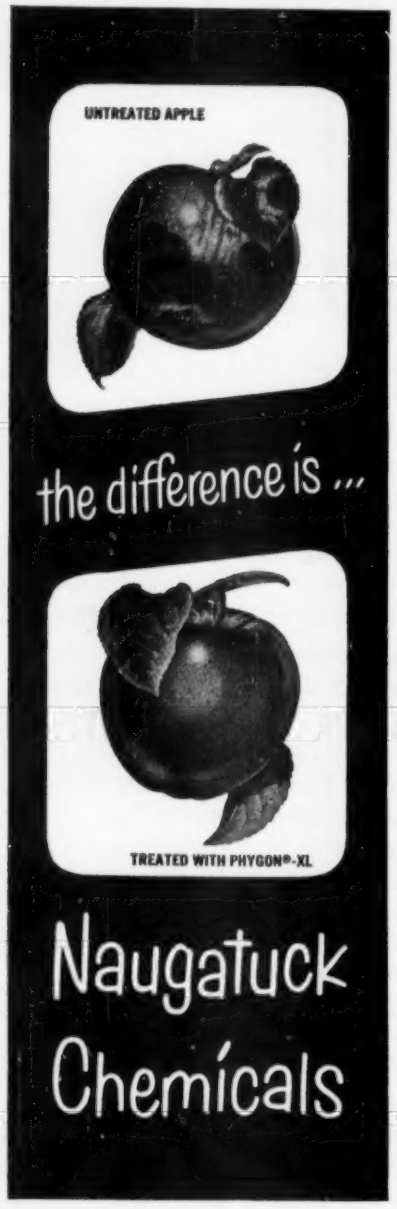
Write us for more information on *high level* Terramycin feeds to protect your flocks and herds.

Pfizer

CHAS. PFIZER & CO., INC.
630 Flushing Avenue, Brooklyn 6, N. Y.

HEADQUARTERS FOR ANTIBIOTICS AND VITAMINS FOR ANIMAL HEALTH AND NUTRITION

Terramycin • Diamine Penicillin • Vitamin A • Riboflavin • Vitamin B_{12}



UNITED STATES RUBBER COMPANY

Naugatuck Chemical Division, Naugatuck, Conn.

manufacturers of seed protectants—Spergon, Spergon-DDT, Spergon-SL, Spergon-DDT-SL, Phygon Seed Protectant, Phygon Nuggets, Phygon-XL-DDT, Thiram Nuggets—fungicides—Spergon Wettable, Phygon-XL—insecticides—Synklor-48-E, Synklor-50-W—fungicide-insecticides—Spergon Gladiolus Dust, Phygon Rose Dust—miticides—Aramite.

Roberts made liberal use of SCS personnel and extension workers. Ray Aune, Olmsted county agent, headed up the hospitality section and its numerous committees. Victor Sander, Dodge Center, took time off from his duties as Dodge county agricultural agent to line up details at the Dodge Center airport. G. J. Kunau, Goodhue county agent, aided with plans for the 4-H and FFA contour line contest. Ernest Schober, work unit conservationist with the Dodge county soil conservation district, had charge of the planning of various soil conservation demonstrations. Other county agents and SCS workers had minor but important roles in preparing for the big two-day event.

Speakers Selected

By spring, negotiations were started to secure a headline speaker. President Truman finally turned down an invitation after weeks of maneuvering by Minnesota congressmen. Desperate, the committee turned to Dwight D. Eisenhower and Adlai Stevenson in an attempt to secure one or the other as the speaker. To everybody's surprise, both men accepted.

This stepped up the tempo of preparations. The candidates' speeches were scheduled for Saturday afternoon as the climax to a two-day demonstration of soil conservation practices.

"We knew that we could expect at least 100,000 people the day those two men spoke," Roberts said. "We had to revise our plans for housing visitors, handling traffic, and feeding the big crowd."

Lease Lots for Funds

Funds were raised by leasing small lots to scores of machinery concerns and food concessionaires at $75-$100 apiece. In addition, advertising space was sold in a beautiful program. A budget of $15,000 was set up to handle the costs but this had to be revised upward as costs kept mounting.

When September 5 finally rolled around, plans had been fully carried out. Saturday, September 6, found officials praying for a break in the weather. Rain had been predicted but instead the day dawned dark and gloomy. By noon, however, as General Eisenhower mounted to the platform, the sun broke out from the clouds.

Huge Crowd Attends

More than 100,000 spectators jammed the area immediately in front of the platform to hear the General expound his views on farm price supports. An even larger crowd gathered later when Governor Adlai Stevenson spoke from the same platform.

By four o'clock, championship trophies had been presented to the winners in the contour and level land plowing contests. The crowd began to break up and soon processions of cars began leaving the seven big fields where parking had been provided. Two battalions of the Minnesota state guard handled the traffic with the assistance of Minnesota highway patrolmen and Boy Scouts.

"No one man or committee deserves credit for the success of this event," Roberts stated. "It was an outstanding example of cooperative thinking and planning."—*End.*

Correction!

On page 58, Better Farming Methods, November, 1952, we listed erroneously the filmstrip "Keep Your Tractor Working for You" as distributed by the Venard Organization, Peoria, Ill.

This filmstrip is distributed by the Massey-Harris Company, Quality Avenue, Racine, Wis. Please write directly to them for it.

Henry P. Smith, Harris county, Texas, assistant agricultural agent, is spraying cattle on a local farm. This was one of a series of 10 spraying demonstrations staged in his area last spring by Dan D. Clinton, Harris county agent. The demonstrations were in cooperation with the Du Pont Company, which supplied the insecticide, and the H. D. Hudson Company, who made a sprayer available. A total of 500 head of cattle and six beef barns were sprayed on 10 farms during the five-day series of meetings. Groups of 4-H club members and FFA boys were on hand for several of the demonstrations.

SERVICE HELPS
LOW COST RESEARCH

ACCEPTANCE
QUALITY CONTROL
DISPERSION

Be sure of all these features when you recommend VITAMIN D2

1. A product easy to use and with good dispersion.
2. Controlled quality, assuring dependability.
3. A product backed by constant research.
4. Service helps for both you and your farmers and feeders.
5. A product nationally known and accepted.
6. A source of Vitamin D at low cost.

See why VITAMIN D_2 FORTIFIED FEEDS ARE BETTER!

In FIDY Irradiated Dry Yeast, Standard Brands supplies feed manufacturers with an effective, economical source of vitamin D_2 for fortifying feeds, minerals and concentrates.

FIDY Service Helps and educational literature are constantly at work telling farmers and feeders why vitamin D feed fortification is so important—why FIDY-fortified feeds are better.

To County Agents and Vo-Ag Teachers, Standard Brands has made available educational booklets, nutritional reviews, and a motion picture—factual material based upon sound research. You will find these educational helps invaluable in your contacts with farmers and feeders.

FREE for Education Meetings

Of particular interest is the 15-minute motion picture RICKETS IN CALVES, based upon research done at Pennsylvania State College. Why not arrange a showing of this informative film soon? You will find it well-suited for FFA, 4-H Club, and farm group meetings.

Details concerning the 16 mm. film RICKETS IN CALVES, a list of educational literature and FIDY Service Helps, or any information about FIDY will be sent promptly on request. Address Desk BFM-1, STANDARD BRANDS INCORPORATED, *Agricultural Department*, 595 Madison Avenue, New York 22, N. Y.

Fleischmann's
F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Research, plant foods, and you

As a leader or teacher of agriculture, you know that improvements rarely come about by chance. That is certainly true of Swift's Plant Foods. Nothing is left to chance in our Plant Food Research Laboratories. There, a staff of trained scientists "follow every road" that may lead to improvement. New manufacturing methods, improved ingredients, new formulations are constantly tested and proved.

In our business of manufacturing Swift's Plant Foods, there is no standing still. What seems to be the last word today is changed by some new development tomorrow. Thus, through the work that goes on continuously at our Plant Food Research Laboratories, Swift is able to "keep on top" of all that is new in plant foods.

Swift's Plant Foods—Red Steer, BLENN and BRIMM and the new PASTURGRO for grass—have all been developed through constant research. Each has been tested and proved for its ability to feed crops for maximum yields and results. PASTURGRO is a good example. It's a new product to farmers and ranchers. But PASTURGRO has several years of constant research behind it. Only after it had been thoroughly tested by practical farmers was PASTURGRO put on the market.

Headquarters for information

In your work, your projects, or on your farm, you may have use for further information on plant foods and their uses.

If so, you'll find a visit with your Authorized Swift Agent or dealer worth your while. He either has the information or can get it for you promptly. And if you are ordering Swift's Plant Foods, remember to order them early this season.

With the County Agents

ILLINOIS FARM ADVISER ACCEPTS POSITION IN INDIA—F. H. Shuman, farm adviser in Illinois for 25 years, has resigned to accept a position as a representative at the Agricultural Institution of Allahabad university in North Central India. The local paper gave Shuman credit for the excellent program he has carried over the past 25 years. We will not attempt to cover all the details, but the outstanding record of his family to me desires repeating.

F. H. Shuman

He had three children: Howard, who is president of the Oxford Union, Oxford University of England; Donald, who received his B. S. degree from the University of Illinois, and his M. A. degree from the University of Chicago in the field of social service; and Mary, a senior in high school.

Shuman plans to fly to India January 16 by way of London, Paris, Rome, Istanbul, Beirut, Karachi, and New Delhi.

He taught agriculture in high school five years in Illinois, was farm adviser in Jersey county three and one-half years, and has been farm adviser at the Whiteside County Farm Bureau, Morrison, Ill., for 23 years.

RECOGNIZE AG AND HOME EC SERVICE—A sizable part of the 22-page edition of the Butler Eagle, a newspaper published in Butler, Pa., on November 11 was devoted to recognizing the fortieth anniversary of the Butler agricultural and home economics service. Special tribute was paid to R. H. McDougall, county agent, and his staff. Besides the large amount of space devoted to the history and praise of the extension work in Butler county, many of the ads were written paying tribute to McDougall, his staff, and the extension program.

County agents of Michigan named these three men as officers of their association at their annual meeting during the extension conference at Michigan State college. Left to right, B. E. Henry, Marshall, Calhoun county agent, secretary-treasurer; C. C. Mullett, district horticultural agent re-elected at Traverse City, president; and Orville F. Walker, Crawford-Kalkaska agricultural agent, vice-president. (MSC photo)

GRASSLAND FARMING AWARDS—One of the features of the 1952 convention of the National Association County Agricultural Agents will be the presentation of awards for achievement in grassland farming. The awards in the form of engraved silver plaques, which are exhibited at the convention, will be given to the winners by Russell Coleman, president, The National Fertilizer Association, at a ceremony scheduled for Tuesday, December 2, at 3:30 p.m.

Earlier this year, in cooperation with the extension service, USDA, and the National Association of County Agricultural Agents, NFA made an offer to each state of a trophy to the county agent who did most during 1952 to promote the National Grassland Program.

The following are the winners from the participating states, as of November 21, 1952: Harold J. Larsen, Mason county, Michigan; R. G. Mueller, Cecil county, Maryland; Frank Murphy, Maui county, Hawaii; Julio E. Correa, Humacao-Las Piedras county, Puerto Rico; Mark Welden Menke, Elko county, Nevada; Aaron Yord, Butte county, Idaho; R. O. Dunkle, Young county, Texas; O. P. Roberts, Carbon county, Montana; Harold M. Stevens, Dawson county, Nebraska; J. B. Snipes, Chatham county, North Carolina; Glenn T. Mc-

—it's NEW and it's a FORD

★ **MOST ADVANCED HYDRAULIC SYSTEM IN ANY TRACTOR**
Live-Action with Hy-Trol

★ **EXTRA POWER... with Great New "Red Tiger" Engine...**
Ford's Greatest Tractor Engine

★ **NEW LIVE PTO***

★ **A BIGGER, HEAVIER, MORE RUGGED TRACTOR**

★ **A NEW HIGH IN COMFORT, CONVENIENCE, SAFETY**

And a LOW FORD PRICE, too

Ford Farming
MEANS BETTER WORK...MORE PRODUCTION

Here's the new Golden Jubilee Model Ford Tractor now on display at the showroom of your nearby Ford Tractor dealer. It is bigger, huskier, more powerful—finest product of a half century of Ford Tractor engineering experience—experience gained in manufacturing over 2 million farm tractors.

Among its outstanding features are its Live-Action Hydraulic System with Hy-Trol... its new Live Power Take-off*... its great new overhead valve Ford "Red Tiger" Engine which makes possible such remarkable performance at such low cost... and many more new, outstanding features.

We cordially invite you to see this new and more powerful Ford Tractor and to investigate its many advantages that help bring new efficiency to power farming.

DEARBORN MOTORS CORPORATION • Birmingham, Michigan
National Marketing Organization for the Ford Tractor and Dearborn Farm Equipment

COPYRIGHT 1953, DEARBORN MOTORS CORPORATION

**Sold Separately*

BIGGER LOADS and BETTER SPREADING

That's why a NEW IDEA is a good idea!

Wider Upper Cylinder and Tapered Bed: No choking or bunching — manure feeds back freely to Wide-Spread Distributor.

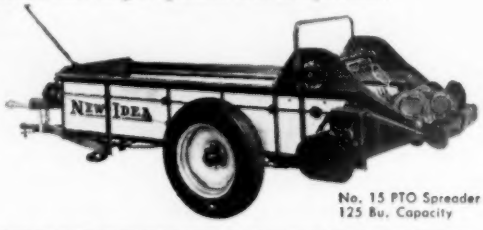
NEW IDEA HORN Loader: Makes a short, easy chore of manure handling and many other heavy loading and lifting jobs. Types to fit wide range of tractors — 10 labor-saving attachments.

Now, a NEW IDEA power take-off Spreader that provides constant power to give you positive spreading control. Heavier steel framework lined with select pine; bigger tires on tapered roller bearing wheels; large upper cylinder and heavy duty distributor . . . engineered to handle actual 125 bushel loads.

Those flared side-boards on a NEW IDEA Spreader make a labor-saving and time-saving difference! Make loading so much quicker and easier, either mechanically, or by hand. Make room for extra fork-fulls in the wider-top wooden box. Make it possible to haul a lot higher load — with least loss along the road.

Every load is a bigger pay load! Even partially frozen chunks are chewed up fast by 100 staggered beater teeth. That famous widespread distributor quickly shreds toughest manure down to best soil-building size. Handy levers permit positive control of coverage.

For sure shredding, plus wide, uniform spreading — more fertility value to boost your yield per field — you'll find a NEW IDEA by far the best idea. But there's many another reason why it's the world's most wanted spreader. Ask your NEW IDEA dealer about this largest ground-driven spreader.



No. 15 PTO Spreader
125 Bu. Capacity

Mail coupon today for free folders!

NEW IDEA SUBSIDIARY AVCO MANUFACTURING CORPORATION
FARM EQUIPMENT CO.
Dept. 747, Coldwater, Ohio

Send free folders as checked:

- ☐ No. 15-A PTO Spreader (125 bu. capacity)
- ☐ No. 14-A Spreader (65 bu. capacity)
- ☐ No. 12-A Spreader (90 bu. capacity)
- ☐ Lime Spreader Attachment
- ☐ No. 10-A Spreader (75 bu. capacity)
- ☐ New Idea HORN Loaders and Attachments
- ☐ "Barnyard Manure" Booklet

Name _____

Address _____

Cleary, Washington county, Minnesota; William H. Chandler, Yuma county, Colorado; Delbert T. Foster, Lee county, Iowa; Vernon C. Hendrickson, Buffalo county, Wisconsin; J. M. Nicholls (irrigated area), Park county, Wyoming; S. E. West (dry-land area), Niobrara county, Wyoming; Stanley Bale, Morton county, North Dakota; Edward H. Schabinger, New Castle county, Delaware; Carl M. West, Leflore county, Oklahoma; Frank Jones, Marengo county, Alabama; and J. P. Baker, Walker county, Georgia.

The following two plaques are being awarded to winning counties instead of the county agents, but the names of the agents will also appear on the plaques: Richard Hartman, Poultry Range Division, Ocean county, New Jersey; and Dwight Babbitt and William McIntyre, Livestock Division, one trophy, Hunterdon county, New Jersey.

★

Calves Gain on Hay

An experiment in economical feeding of dairy heifers is described by the Wyoming agricultural extension service.

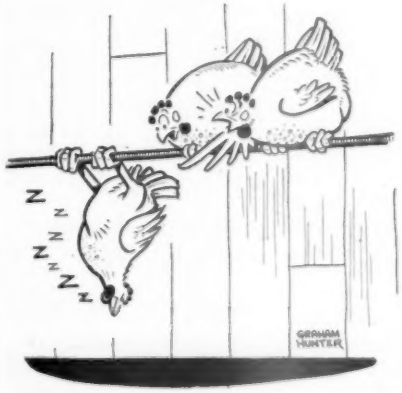
In the past, feeding specialists have recommended feeding dairy heifers grain continuously from the time they are a few weeks old until they are due to calve.

But now Department of Agriculture dairy scientists report that tests show if you feed dairy heifers all the good quality alfalfa hay they will eat at all times, you can raise them satisfactorily from birth to two years old with as little as 500 pounds of grain.

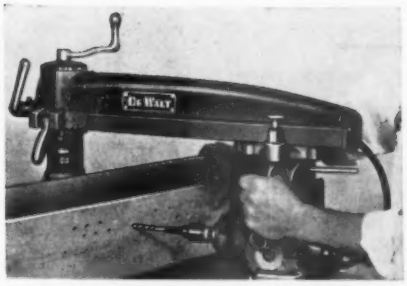
Heifers fed about 500 pounds of grain in the first nine months, and no grain after that, made as good growth as heifers fed a total of 2,250 pounds of grain over a two-year period.

Scientists emphasized that the economical gains made by the group that had their grain stopped when they were nine months old, were possible only because from that time on they had all the high-quality forage they would eat.

★



"Her mother was frightened once by a possum."



An inexpensive adapter is available for the DeWalt "Power Shop" radial arm saw which permits boring. Made by DeWalt, Inc., Lancaster, Pa.

★

An Ag Study Shows . . .

Good Grades— Better Income

"Only a bright boy should farm.

"The better his grades in high school, the more money he will make 10 years later."

This may seem like a lot of poppycock to some—but Neill Lefors, vo-ag teacher, Checotah, Okla., has the records to back up his statement.

Lefors made a study on the comparison of a boy's grades in school and the kind of farmer he makes. He learned some very interesting—and startling—facts.

The teacher has kept records on the 337 boys who have taken vo-ag in his classes during the past 15 years. For this particular study he was able to get the facts on 300 of his students.

Seventy-four of his former students were farming—all but two or three of them in the Checotah community. Twenty of the former ag students are in some work related to agriculture and 16 are dead—12 of these were killed in the last war. Forty-three are still in college taking more agriculture.

Here's what the teacher found: Twenty-three students who made "A" in agriculture under Lefors, in 1950, had an average annual income of $3,978.88. The 97 "B" students made $2,835.27; the 142 "C" students had an average income of $2,120.00; the 54 "D" students had $1,724.97, and the five "F" students averaged $1,175.00 annually.

This study, which has been checked and double checked from every angle, has caused Lefors to recommend that "we should go slow in advising boys who make poor grades to become farmers."

Agriculture today, he feels, is highly competitive. And it takes a smart boy to be a successful farmer. By the way, his records show that 75 percent of his "D and F" students are no longer living on the land.—*Jack Putman, Oklahoma FFA Association, Stillwater, Okla.*

Ask your Sinclair Representative when the Sinclair Farm Show will be held in *your* community – and plan to be there! And don't forget, he has something special in gasoline – Patented Sinclair Anti-Rust Gasoline containing RD-119®, the amazing rust inhibitor that prevents rust in fuel systems. With Sinclair, you get power aplenty and protection, too, at no extra cost. Ask, too, about the rest of his full line of high-quality Sinclair products – they're tops in the toughest going.

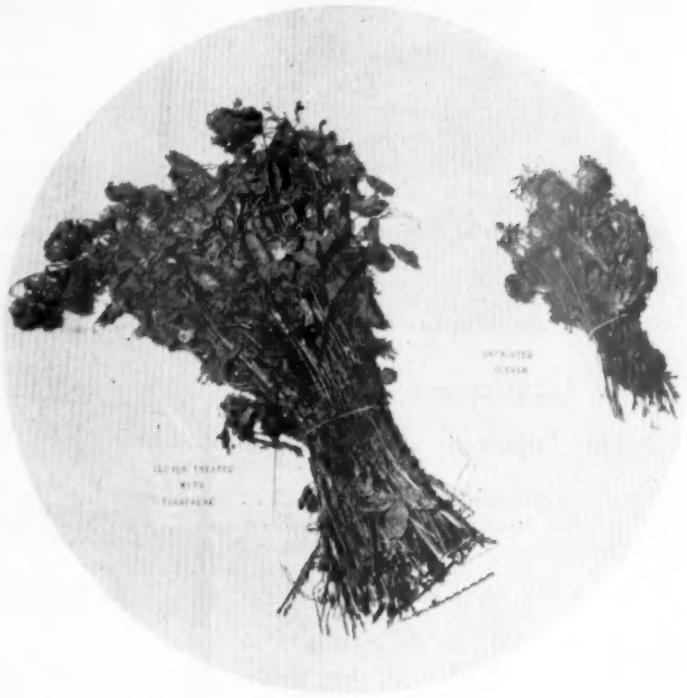
SINCLAIR FARM PRODUCTS

SINCLAIR HC GASOLINE®

Hay Yield and Quality Can Increase Because . . .

Insecticides Control Forage Pests

By R. W. Leiby
Department of Entomology
Cornell University



Yields of clover hay have been greatly increased by one or two sprays with toxaphene. —Photo courtesy Hercules Powder Company.

● THERE ARE AS MANY as 1 to 10 million insects at one time on an acre of forage crops such as alfalfa and clover. During a season most of them die after they feed and breed. Another few million can take their place.

How do I know? Take a bug net! Make a half dozen sweeps over the plants with it. You may find a half tea cup of bugs in it. You don't count them. You count how many it takes to weigh a half ounce. A little figuring and you have a fair idea of the insect population.

Many Insects In Field

Depending on the time of the growing season that you bug-sweep the forage crop your net will turn up leafhoppers, aphids, spittlebugs, and thrips that are sucking the plant juices; weevils that are feeding on the flower; grasshoppers, cutworms and caterpillars that are chewing leaves and stems. But don't stop with the insect complex on the plants above ground. Go underground and you will meet up with grubs, snout beetles, wireworms and root borers. They are weakening the plants by feeding upon underground stems and roots.

Entomologists have known for years of the destructive activities of these many kinds of insects on clover, alfalfa, alsike, birdsfoot treefoil and other forage crops. They were powerless to do anything about them until some of these newer bug killers appeared.

They were helped too, when the inexpensive weed or low-pressure sprayer came along.

Control Major Pests

The aim in the field tests was to control two or three major pests of a crop. For example, they would be the leafhoppers, spittlebugs and weevils on clover. A single application of an insecticide like toxaphene, chlordane, methoxychlor, DDT, or parathion was made. As little as a quarter of a pound to one pound of the actual pesticide is distributed in about 30 to 40 gallons of the liquid over an acre.

When the right insecticide is used on a forage crop whether raised for forage or seed, it kills not only the major pests but many of the minor pests present at the same time.

The response in hay and seed increase has been next to phenomenal in seasons when the insects are abundant.

Increases Vitamin Content

In New York in 1952 an extensive series of demonstrations conducted with county agents by Dr. George Gyrisco, Cornell university, showed increases in alfalfa and clover hay from 25 to 55 percent. And only one treatment was made in most of the tests. This was on the first cutting. In some cases a second treatment on the second cutting would have paid high dividends.

Not only was the yield increased greatly but the quality was improved. The vitamin A content was increased and there was more carotin in the hay. This was reflected favorably in steer growth and milk production.

In the northwest several seasons' tests showed that the yields of clover and alfalfa seed were doubled when one or two treatments were made.

Which insecticides should be used on forage crops and when? The answer varies for most states. That is because pests like the alfalfa weevil, webworms and the sweet clover weevil are not uniformly established over the country.

Different pesticides are called for. Too, if the treated forage is fed to milking cows or to cattle going to slaughter, you would want to be sure that a harmful residue is not on the hay crop at feeding time. If a seed crop is to be grown no residue problem is involved.

You would want to avoid putting on insecticide while the crop is in bloom because honey bees and other insects are the necessary pollinators. If it has to go on during bloom you would want to think of toxaphene because it is less poisonous to bees.

Yield Will Increase

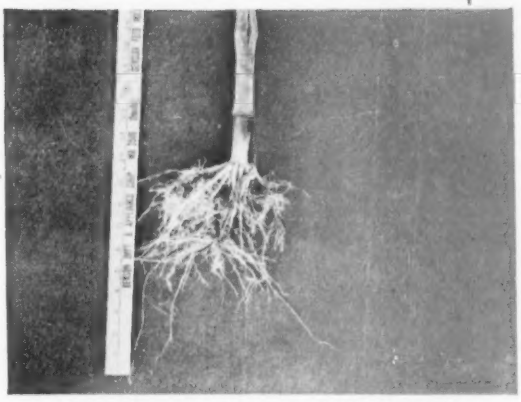
The agricultural experiment station of your state probably has the answer as to what to use as an insecticide and when and how often to apply it.

Of one thing we can be sure. It is that our forage crops and seed production of them will be materially increased in quality and quantity through a program of insect control. One of the major uses of our insecticides will be for forage insect control.—*End.*

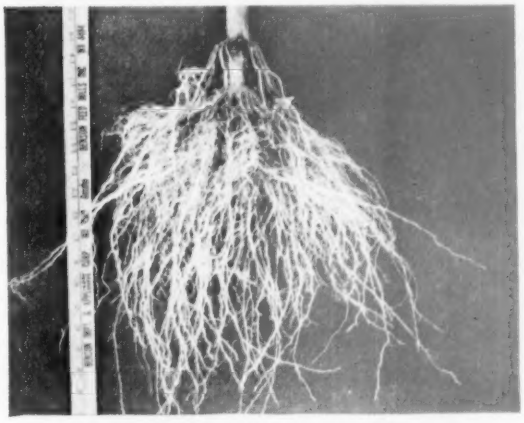
Here's proof that

aldrin

controls corn rootworm



Roots from Siert Farm, Millard, Neb. (above). Root system from check row shows severe rootworm damage. (Below) Healthy root from adjoining aldrin-treated row.



Results from all parts of the corn belt prove aldrin means greater corn yield

Read what farmers in Iowa say about aldrin:

Howard Burroughs of Clarksville says, "Last year after a windstorm my corn was leaning just about flat. It was so bad I could only pick one way. This year I used aldrin and it really got results. My neighbors spent all kinds of money trying to keep their corn standing but it didn't do much good. When they saw my aldrin-treated corn they said that's what their corn needed. Next year they're going to use aldrin and so am I. I'm sold on aldrin."

Harry Yorgensen of Madrid writes, "I treated some test rows with aldrin and left some untreated check rows. You don't have to look hard to find the aldrin-treated rows. Next year I'm going to treat with aldrin and plant corn where I've had my worst rootworm."

Here's what *you* can expect from aldrin-treated corn:

1. **Less lodging . . . easier picking.**
2. **A healthy early stand . . . no replanting . . . an earlier harvest.**
3. **More bushels per acre of higher quality corn.**
4. **Low-cost-per-acre control.**
5. **Easy application. For row treatment, use aldrin mixed with starter fertilizer, or as a spray at time of planting. Aldrin may also be used as a broadcast treatment.**

See your dealer . . . write for literature and application instructions.

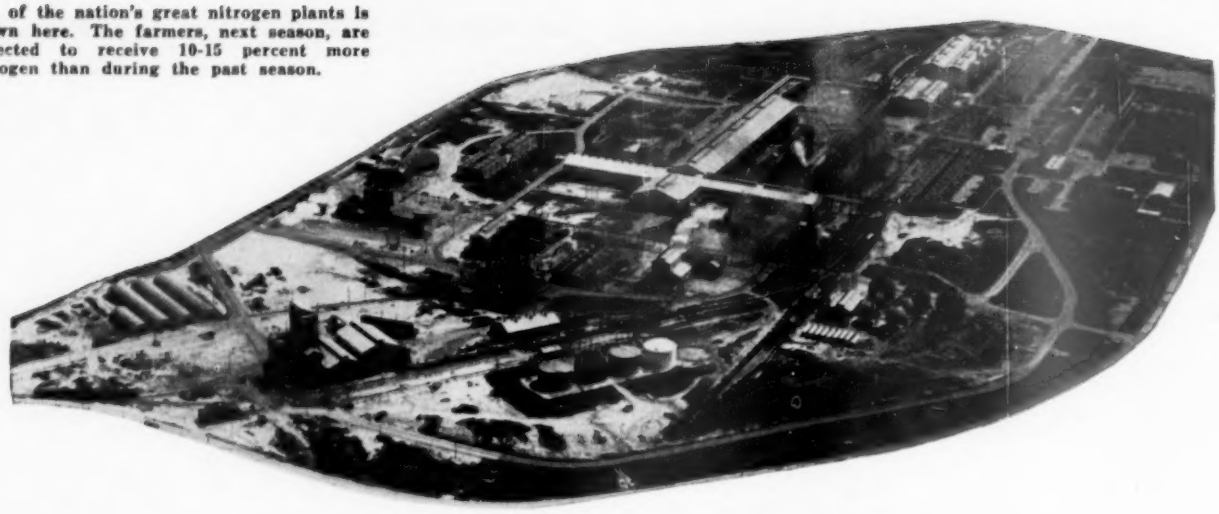
Julius Hyman & Company Division

SHELL CHEMICAL CORPORATION

CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE

P. O. BOX 2171, DENVER 1, COLORADO

NEW YORK · ATLANTA · CHICAGO · HOUSTON · ST. LOUIS · SAN FRANCISCO · LOS ANGELES



One of the nation's great nitrogen plants is shown here. The farmers, next season, are expected to receive 10-15 percent more nitrogen than during the past season.

For Your Guidance, Here is the...

Fertilizer Outlook for 1953

● FERTILIZER SUPPLIES for the 1952-53 season are expected to be between 12 and 15 percent greater than during the past season.

Unless unforeseen difficulties intervene, production at plant food factories for the coming crop year will reach another new all-time record.

Meanwhile, manufacturers are gearing their operations for bigger than ever expansions of old operations. They are building new plants to meet the fast growing food and fiber needs of a population growing at the rate of another state almost the size of Minnesota each year.

Truitt

By Paul T. Truitt

President, American Plant Food Council

Fertilizer Use Important

The role of fertilizers in a sound land management program is becoming increasingly important to the national welfare. When used under proper conditions with other desirable practices, fertilizers can bring about a greater increase in production of all crops than any other single influence. The growing population, the fact that there are few, if any, new land frontiers, plus the rising labor costs of crop production, focus attention on the economic value of fertilizer as never before.

The land grant colleges and the U.S. Department of Agriculture recognize the growing need for more and more fertilizers in their new and jointly conceived program calling for more efficient use of plant foods and lime.

To provide the additional food and fiber needed by 1955, the defense production goals call for 70 percent more nitrogen, 55 percent more phosphate and 51 percent more potash than was used during the 1951 crop year.

What the proper and more efficient use of fertilizer would mean to farmers everywhere is emphasized in a report of the Fertilizer Work Group of the National Soil and Fertilizer Research committee.

Greater Yields Possible

For example, in viewing fertilizer use and plant yields in the North Central region, the corps of nationally known soil scientists report that 40 pounds of nitrogen per acre would give spectacular returns in field crops if used with adequate supplies of other fertilizer nutrients. They add that "it would produce an additional 600 million bushels of corn, 200 million bushels of wheat . . . and 400 million bushels of oats."

Further, the report states that "by developing the current average application of phosphoric acid (8 pounds an acre) North Central growers could increase yields of corn by 120 million bushels and of wheat by 30 million bushels."

The Committee's Fertilizer Work Group report indicates that western farmers are getting less than half of the potential yields on present plantings of wheat, hay, and corn. Emphasis is placed on the fact that "increased fertilization with phosphoric oxide and nitrogen would boost hay yields nearly 6 million tons—equivalent of 3 million acres under present practices; wheat yields 48 million bushels or 2,600,000 acres; and corn yields 10 bushels an acre or a total of nearly 10 million additional bushels."

Nitrogen Is Needed

Further findings of the Work Group indicate that "In the Midwest, high nitrogen fertilization—now applied only to tobacco—would give spectacular returns in field crops if used with adequate supplies of other fertilizer nutrients. It would produce an additional 600 million bushels of corn, 200 million bushels of wheat—equivalent to present plantings of 14 million acres of each crop.

"In the South, scientists estimate the present average yield of 26 bushels of corn an acre represents only a third of the potential production. A combination of heavier fertilization, the use of adapted hybrids, close spacing, and other good management practices would

Dust one day—harvest poison-free crops two days later!

Yes, amazing TEPP makes this possible. TEPP is swift and sure—a powerful killer that leaves no lingering poison residue. When handled according to recommended procedures, it is ideally suited to a quick bug clean-up. With this remarkable pest-control ingredient, growers can stop last-minute infestations which often make products unfit for market. Processors and packers can now be assured of cleaner, higher quality crops.

TEPP can be economically formulated 1) as a liquid concentrate, 2) as a stabilized dust, and 3) with other active ingredients. It is compatible with most other pesticides.

TEPP in its pre-spray or active form, as are other highly potent insecticides, is very toxic to man. Adequate precaution must therefore be taken in its handling and shipping. Instructions for proper mixing and safe handling are available from the manufacturers of TEPP.

For fewer rejects and consistently higher grade crops that need less washing, specify formulations containing TEPP. Ask your supplier for further information about this effective pest-destroyer. For the names of the manufacturers of TEPP, write to Tennessee Eastman Company, Division of Eastman Kodak Company, Kingsport, Tennessee.

24-6241-5

TEPP* ***means pest-free crops poison-free crops***

Tetraethyl Pyrophosphate is made from triethyl phosphate—an EASTMAN chemical. **TEPP is not made by Tennessee Eastman Company.*

ROYSTER
guarantees the
6 PLANT FOODS
all crops need for
• BALANCED DIETS
• MAXIMUM YIELD
• BIGGER PROFITS
Field tests have proved repeatedly that most soils lack and all crops must have these SIX plant foods. That's why every ROYSTER analysis contains all six in chemically-controlled and guaranteed amounts. Here's how they help all crops.
• NITROGEN for rapid growth
• PHOSPHORIC ACID for maturity and yield
• POTASH for health and quality
plus
• CALCIUM OXIDE for sturdy plants
• SULFUR for vigor and tone
• MAGNESIUM OXIDE for color and snap
And here's VISUAL PROOF why the 6 Plant Foods guaranteed in ROYSTER'S pays off!
This USDA solution culture test dramatically compares results obtained with and without proper plant diet. Plant food deficiencies are shown as follows: (1) no nitrogen, (2) no phosphorus, (3) no potassium, (4) no calcium, (6) no magnesium, (7) no sulfur. Compare these results with (5). This well-fed tobacco plant clearly shows the difference when all 6 plant foods are used to furnish a balanced diet.
Royster
with 6 Plant Foods GUARANTEED pays off!
Royster
21 Factories Conveniently Located to Serve Farmers in 20 States
F. S. Royster Guano Company, Home Office: Norfolk, Va.

triple corn yields in this area.

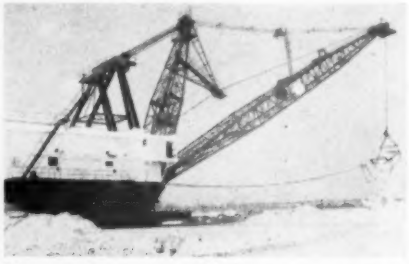
"This would have meant more than a billion additional bushels from the approximately 24 million acres planted in 1949. It would have required an estimated 1¼ million tons of nitrogen. Total U.S. consumption of nitrogen in fertilizers in 1949 was little more than a million tons."

Grassland Yield Is Low

Nationally speaking, our agricultural scientists tell us that we have a billion acres of grassland in the United States and they estimate that we are getting only 25 percent of the real potential out of our pastures, rangeland and meadows.

In terms of the three so-called major plant foods . . . the picture for next season is about like this:

NITROGEN . . . right now, we can report that the full program for increased production by 1955 has been authorized.



Monstrous electric draglines are used in mining phosphate deposits. They will be operating at maximum capacity during the coming season to furnish farmers 10 to 12 percent more phosphate than they received in 1951-52.

Manufacturers are building new plants and older facilities are being enlarged.

For the 1952-53 season, farmers should receive and probably will receive 10 to 15 percent more nitrogen than they received during the past season. Furthermore, Chilean nitrate of soda imports, curtailed last year by a prolonged strike, are expected to reach farmers at a satisfactory rate during the 1952-53 crop year.

More Phosphate Forecast

PHOSPHATE . . . the program is not fully completed but all indications are that the 1955 goals will be reached in time. Last season the critical sulfur supply was a big headache to manufacturers. Right now, the sulfur supply seems to be improving.

Assuming some continued improvement and the availability of new sources of sulfuric acid, the supply of available phosphates for next season is forecast at about 10 percent greater than the season just ended.

POTASH . . . expansion presents a relatively simple problem. Under normal expectation, the 1955 goal will be met in a most satisfactory manner.

The 1952-53 supply of potash for fer-

tilizer purposes will reflect production of new facilities and the expansion of older operations. For the immediate future, the supply of potash for next season is expected to be 17 percent above the 1951-52 supply.

In summary, the fertilizer outlook definitely points to a new high in production.

However, to avoid disappointments and delays, farmers everywhere should consult their experiment stations and extension services about fertilizer recommendations and then order and take deliveries as soon as possible.—*End.*

★

4-H Students Sell Education

Almost 12,000 4-H Club boys and girls in Tennessee got a clearer picture of higher education this past summer from two University of Tennessee students who "came up through the ranks."

The two youthful "salesmen" completed a number of series of cross-country trips to Tennessee's five district 4-H Club camps in a program believed to be unique in the nation. The two former 4-H Club members gave talks, showed slides, and answered questions about college life and opportunities.

The experiences they related, according to 4-H Club specialist, Lonnie L. Safley, were university experiences but their "selling" was for all schools offering a broad agricultural and home economics program.

In its first year, the new program probably has reached a "better than average cross-section of Tennessee youth," according to Safley. He believes it is the first program of its type ever attempted. The University of Tennessee agricultural extension service is sponsoring the program under general supervision of Director J. H. McLeod who is also dean of the College of Agriculture.

★

"Looks like the mailman is due another batch of your lemon cookies."

Efficiency and comfort both belong in today's progressive farming—And just as they both belong so do the proper minerals and fertilizers belong in your soil if optimum production is to be achieved. Soil poor in minerals cannot produce abundant crops rich in vitamins. Es-Min-El contains these mineral elements: Manganese, Copper, Boron, Zinc, Iron and Magnesium—all essential to healthy plant growth and increased yield. Your crop production is just as good as your soil—Good productive soil must have the proper mineral balance—Es-Min-El contains the essential mineral elements. For an increased yield of vitamin-rich crops—Mineralize your soil with Es-Min-El now.

TC
TENNESSEE CORPORATION

ES-MIN-EL is now available in spray or dust form. If you haven't mineralized your soil, you can now feed these essential minerals to your plants through the leaves and stems.

ES-MIN-EL spray or dust is a neutral form of Copper, Manganese and Zinc.

ES-MIN-EL Essential Mineral Elements TC SPRAY OR DUST

REQUEST

that your local fertilizer dealer furnish you a completely mineralized fertilizer containing the essential mineral elements!

FREE BOOKLET

Send card or letter to Tennessee Corp., Grant Building, Atlanta, Georgia.

TENNESSEE TC TENNESSEE CORPORATION **CORPORATION**

Atlanta, Georgia

Every chemical tested by the federal government for insecticidal possibilities faces years of testing before it can be recommended for use by the public. Here a USDA entomologist notes the condition of house flies, a standard test insect, that have been exposed to an experimental insecticide in the apparatus-aluminum drums on a turntable.

This chemist is dissolving the spray deposits from samples of apples sprayed with DDT. Such analyses of spray deposits on treated apples show whether or not people eating the fruit will face a spray residue hazard. They also show, when compared with control data obtained by the entomologist, how much poison is needed to control the worms and how susceptible the spray deposits are to the effects of rain and other factors.

What Is the Truth? Are there . . .

Pesticides In Our Food Supply?

By David G. Hall

Bureau of Entomology and Plant Quarantine
U.S. Department of Agriculture

● TODAY, nearly everyone connected with crop production knows if insects and diseases aren't controlled, there won't be enough food, feed, or fiber to care adequately for our economy.

But the general public doesn't know it. Many people apparently believe that sprays and dusts to control such pests aren't really necessary.

Some people not only believe insecticides and fungicides aren't necessary, but there should be a law passed prohibiting their use.

Wild newspaper and magazine yarns—written mostly by people with few or no facts, are frightening great segments of the general public. These yarns furnish the thought that all pesticides, such as insecticides, can slowly and insidiously damage the health of the public.

This is not true. The public isn't slowly and surely being poisoned to death. Leading scientists and toxicologists say no single instance has come to their attention in which any insecticide, applied as directed, has made a single individual seriously ill.

Now these scientists know this, but the frightened public doesn't. Thus, it becomes the obligation of each of us to see that the facts behind our never-ending "Insects Versus Our Economy" case is carried to the public.

In accepting this responsibility, we must also accept the responsibility for educating farmers and others who use insecticides and other farm chemicals in following instructions given for their use. Directions for use are found on the label on every package. There is a federal law that makes manufacturers selling pesticides interstate to furnish these instructions.

It is the responsibility of every agricultural leader to see that the public knows we can't produce commercial crops of fruit or vegetables without insect control. We'll control insects, and plant diseases, or the public will do without these necessary food supplies. That means we'll use insecticides, for we won't allow our crops to go to plant pests by default.

But at the same time, we must see to it that users of pesticides know how, when, where, and what to apply for the greatest good.

Government Regulates Use

Purity of our food rests largely with the Food and Drug Administration of the Federal Security Agency. This administration is empowered to seize foods contaminated with harmful residues of chemicals shipped interstate.

To show you that farmers do follow the instructions they find on packages of pesticides, the Food and Drug Administration has seized practically no foods in recent years that carried residues of our modern bug-killers. Most seizures were based on contamination by the bugs themselves.

Before the days of DDT, parathion, methoxychlor, and the

For Orchard & Field Crops • Farm & Ranch

GENERAL CHEMICAL

Spraying and Dusting Materials

Proven by Field Performance!

DDT

Genitox* S-75 Spray Powder (75% DDT)
Genitox S-50 Spray Powder (50% DDT)
Genicop* Spray Powder (DDT-Neutral Copper)
Genitol* EM-25 (25% DDT Emulsifiable Concentrate)

PARATHION

Genithion* P-25 Spray Powder (25% Parathion) (Formulated to reduce dust)
Genithion P-15 Spray Powder (15% Parathion) (Formulated to reduce dust)
Genithion PEM 250 Emulsifiable Concentrate (25% Parathion)
EM 4-25 Parathion—DDT (4% Parathion—25% DDT)
EM 5-25 Parathion—DDT (5% Parathion—25% DDT)

BENZENE HEXACHLORIDE

G-12 BHC Spray Powder (12% Gamma Isomer)
BHC Emulsifiable Concentrate (1.6 pounds Gamma Isomer per gallon)

LINDANE

25% Lindane Spray Powder
20% Lindane Emulsifiable Concentrate
75% Lindane Seed Treater

ARSENICALS

Lead Arsenate, Astringent
Lead Arsenate, Standard
Lead Arsenate, Basic
Paris Green
Calcium Arsenate, Standard

ORGANIC MITICIDE

Genite† EM-923 Miticide (2,4-Dichlorophenyl Ester Benzene Sulfonic Acid)
Genite† 883 Spray Powder (P-Chlorophenyl p-Chlorobenzene Sulfonate)

DDD

50% DDD Spray Powder
25% DDD Emulsifiable Concentrate

METHOXYCHLOR

50% Methoxychlor Spray Powder
24% Methoxychlor Emulsifiable Concentrate

NICOTINE

Nicotine Alkaloid
Nicotine Sulfate, 40%

ROTENONE

"400" Spray (4% Rotenone)
"100" Dust (1% Rotenone)
"75" Dust (¾% Rotenone)

ORCHARD BRAND SPRAYS & DUSTS

COTTON INSECTICIDES, DEFOLIANTS, and WEED KILLERS

Various formulations including—
BHC-DDT-Sulfur
DDT Emulsifiable Concentrate
BHC Emulsifiable Concentrate
BHC-DDT Emulsifiable Concentrate
Aldrin-DDT-Sulfur
Aldrin Emulsifiable Concentrate
Geniphene† (Toxaphene) Sulfur
Geniphene Emulsifiable Concentrates
Dieldrin-DDT-Sulfur
Dieldrin Emulsifiable Concentrate
Chlordane Cotton Dusts
Also other organic insecticides and other defoliants for cotton
Parathion (1% & 2%)
Parathion Emulsifiable Concentrate
Potassium Cyanate Cotton Defoliant
Pre-Emergence Weed Killer-Dinitro Spray Concentrate

COPPER FUNGICIDES

"530" Spraycop* (53% Metallic Copper)
"340" Spraycop (34% Metallic Copper with spreader sticker)
Bordeaux Mixture
Copper Sulfate (Crystal and Monohydrate)

ORGANIC FUNGICIDES

No. 15 Ferbam Dust (15% commercial Ferbam)
Ferbam Spray Powder
Ziram Spray Powder
"Puratized" Agricultural Spray (Organic Mercury)
"Puratized" Apple Spray (Organic Mercury)

SULFUR FUNGICIDES

Dritomic* Sulfur
Micro-Dritomic* Sulfur
Dry Lime Sulfur
Agricultural Sulfurs
Lime Sulfur Solution

OTHER PRODUCTS

Stafast* Pre-Harvest Spray
Filmfast* Spreader-Sticker
Geniphene T-40 Spray Powder (40% Toxaphene)
Paradichlorobenzene
Protective Tobacco Poison

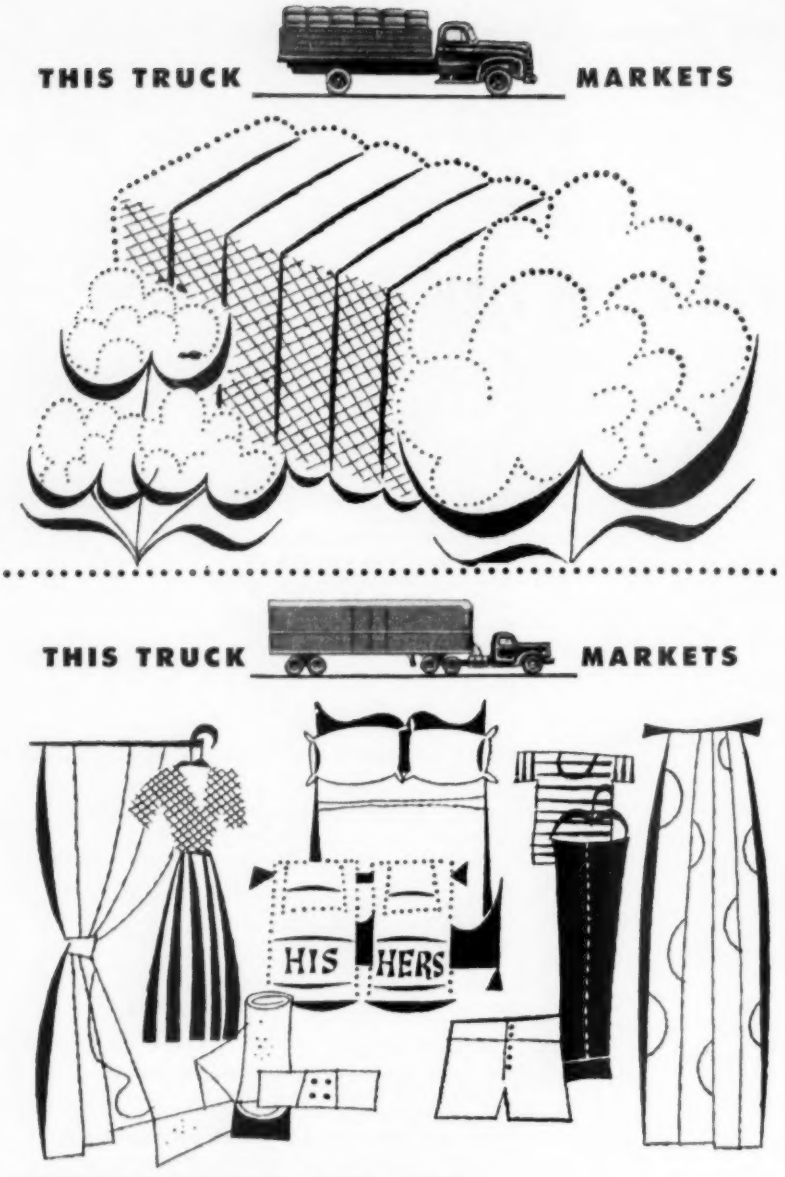
WEED KILLERS and DEFOLIANTS

2,4-D Formulations (Amines and Esters)
2,4-D—2,4,5-T Brush Killer
TCA, Sodium Salt
2,4,5-T Formulations
Potassium Cyanate (Onion Weed Killer)

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Serving Agriculture from Coast to Coast

* Reg. U. S. Pat. Off. † General Chemical Trade-Mark



CRIPPLE EITHER ONE AND

YOU CRIPPLE YOUR MARKET!

Cotton has two markets—and it gets to both of them by truck. A truck *takes* it to the first market, to gin, warehouse and mill. Trucks *make* the second market. Big inter-city trucks that carry hundreds of cotton items to the nation's stores have caused a revolution in marketing!

Nowadays you can find, *right in your local stores*, the latest styles in cotton clothes. You get a wider variety and lower prices. Fast, efficient service by inter-city trucks has made this growth in distribution possible. Stores and shoppers both benefit. Farmers benefit through increased demand and sale of cotton products.

That's the American way! Working with farmers to *make* and *expand* markets, the big trucks have given all agriculture the freedom to choose a way of transportation best patterned to its special needs.

Unfair measures designed to cripple the trucking industry actually cripple the farmer. When a blow is struck at trucks-going-to-market, *you* feel the pain.

AMERICAN TRUCKING INDUSTRY

American Trucking Associations, Washington 6, D.C.

newer hi-powered insecticides, it was common for arsenical-contaminated fruits or vegetables to be seized by the Food and Drug Administration.

Follow Label Directions

Insecticides are poisons. Otherwise they wouldn't kill insects. But when applied in amounts according to directions, always given on the label, they kill the insects for which the insecticide was designed (this, too, is given on the label), but won't harm humans, animals, wildlife, soils, or plants.

This means our insecticides of today are getting safer from the standpoint of the consumer of protected products. But at the same time, they are becoming more dangerous from the standpoint of the man who applies them.

Here's the way it works out. Two ounces of aldrin does for all the grasshoppers on an acre. Aldrin is highly poisonous when it is concentrated, but two ounces sprayed over an acre doesn't put much on a single plant—enough to kill grasshoppers and a few other insect species, but far too little to be harmful to humans, livestock, wildlife, plants, or soils.

A single pound of DDT per acre in a gallon of oil sprayed over a forest will kill most of the insects defoliating the forest—but it won't appreciably affect anything else. The oil alone, sprayed at high rates, would kill the forest, but a gallon is harmless.

Aspirin Can Kill, Too

Even our so-called "safest" chemicals can be harmful if applied in excessive amounts—even aspirin.

The "read the label" idea is an old one—as old as the label idea itself. But in this day of modern agricultural chemicals, there isn't anything more modern. Labels on our insecticides today tell: (1) What is in the package; (2) what insects it will kill; (3) how to make up the contents of the package for use; (4) how to apply it; and (5) what rates to apply per acre. If the chemical is highly poisonous, the label gives special directions for safe handling, and the antidote if needed.

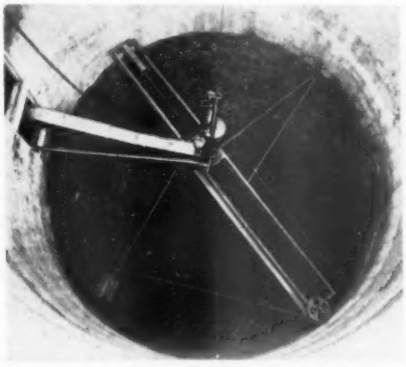
Many things can happen when these directions aren't followed. Certain insecticides are good for one insect and not another. Some insecticides harm some kinds of plants, but not others. Any insecticide applied at certain seasons of the year or at rates per acre greater than recommended can leave residues that might be harmful if consumed by man or animal. Some leave residues under any circumstances and must not be eaten by humans or fed to livestock.

So, the key to modern insect control is: *"Read the directions given on the label on the package. Follow these instructions explicitly."* There are too

many chemicals with varying attributes today to generalize much, except to be careful with all of them.

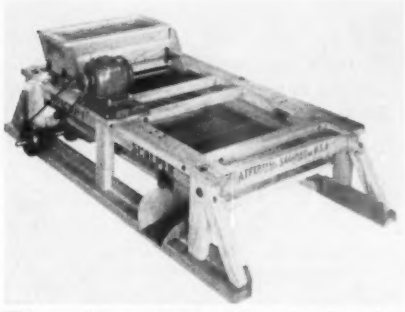
Used and applied properly, the modern insect-killer is a boon to our agriculture economy. But it must not be used carelessly.—*End.*

★



This big five horse power silo unloader, with 9-inch augers, will deliver the hardest packed silage, frozen or unfrozen, to the feed room shredded as fine as when first blown in. Made by VanDale Farm Machines, Wayzata, Minn.

★



This machine, called a scalper, is adapted to operate ahead of the line of finished cleaners for cleaning farm seeds. It is especially useful in cleaning grass seeds. It will rapidly remove, chaff, straw, stems, sticks, pods, green matter, and large weed seeds so that the finishing cleaners are not hampered by this trash and other extraneous material. Now available from the A. T. Farrell & Company, Saginaw, Mich.

★

Wheat Kernel Damage

An excellent four-color bulletin on wheat kernel damage has been prepared by the Kansas State college extension service.

Four-color illustrations of the principle wheat kernel damages are shown. Also illustrated in color is the procedure for identifying "sick wheat." An excellent chart on the great requirements for hard red winter wheat is also included.

Agricultural leaders desiring a copy of this bulletin may write directly to Kansas State College Extention Service, Manhattan, Kan., attention Norman V. Whitehair.

THE WINNER: Keithe Foley of Cheney, Kansas, holds up the arm of his 10-year-old son, Kenneth, who grew 60 bushels of wheat per acre in a 4-H project. Average yield for his area was 25 bushels. Foley himself grew 40 bushels.

4-H Boy Grows 60-Bushel Wheat

It may sound unbelievable, but 10-year-old Kenneth Foley of Cheney, Kansas, last year grew 60 bushels of wheat per acre on a six acre plot in a 4-H project. Neighbors, who felt lucky to get 25 bushels, rubbed their eyes in amazement.

Kenneth's secret was fertilizer. In a wheat growing area where fertilizer still is little used, he applied the fertilizer treatment recommended by Kansas State College and used by his father: balanced fertilizer in the fall, followed by 100 pounds of Spencer "Mr. N" Ammonium Nitrate Fertilizer in the spring.

Kenneth's dad made 40 bushels of wheat per acre with similar fertilizer treatment. This was due in part to the fact that Kenneth's plot was in its first year out of sweet clover.

Kenneth's friends in 4-H Club work are proud of his accomplishments. He is another example of the fine work being done by our "Professionals of agriculture"—Vo-Ag teachers, county agents, extension workers and all the rest.

Mr. N SPENCER®

Supplies the Nitrogen

SPENCER CHEMICAL CO.

Executive and Sales Offices

Dwight Building, Kansas City, Missouri

Designed to take care of the growing number of spraying jobs on the average diversified farm, the trailer type multiple-purpose sprayer is ready for instant use. It is powered either by tractor power take-off or a separate engine and develops pressures from 30-50 pounds for weed spraying, to 400 pounds or more for such jobs as spraying livestock.

Sprayers, specifically designed for field and row crop use, are often tractor mounted. New features of current models include new mounting brackets to facilitate attachment to tractor, pendant attachment with wide range of adjustment for proper placement of sprays, and new pumps, including piston and diaphragm types adapted to power take-off operations, as well as improvements in rotary types.

The cart-mounted compressed air sprayer with the multiple-nozzle hand boom provides a convenient method of spraying plantings around the farm house and yard for fly and mosquito control.

A Pictorial Review of...

Farm Sprayers and Dusters

By Earl Anderson
National Sprayer and Duster Ass'n

● TODAY A FARMER can choose a sprayer or duster to fit either the general needs of his farm or one specific farm job. He can do this just as he can select the proper chemical to control a number of insects or plant diseases or another chemical which will control one specific pest.

This wide choice of types and models of equipment is especially important to farmers now as they look for further ways and means of reducing losses and improving quality of the farm produce they use and sell. Other considerations are the savings in labor, possible through such uses as the chemical control of weeds and brush, and the freedom from annoyance of bothersome insects, which tend to multiply in great numbers around farm buildings.

Illustrated on these pages are various types and models of sprayers and dusters being used on farms throughout the country to suggest the types of jobs for which each piece of equipment is adapted.

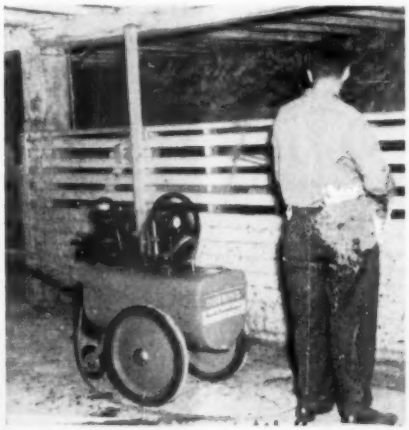
The automatic spray-head, designed to permit one man operation of high pressure spray rigs, helps fruit growers lick manpower shortages and high labor costs. The automatic oscillation feature assures proper spray penetration to the inner portion of the tree branches.

Applying one of the new herbicides during the dormant season is proving to be an effective method of controlling undesirable brush. This is one of the many farm uses for the compressed air sprayer, which is available in sizes ranging from 1½ to 6 gallons.

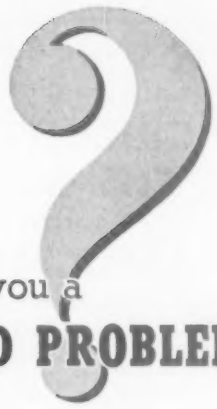
This engine-powered high clearance duster is suitable for dusting such crops as staked vegetables and cotton, as well as tobacco, without danger of bruising the plants. Other common uses include control of second brood corn borers and defoliation of cotton.

Field or truck crops can be quickly protected from insect or plant disease infestation with the tractor-mounted power dusters. Usually providing four to six row coverage, these dusters are powered either by the tractor power take-off or by a self-contained air cooled engine. Some models can be supplied with a fan case having one or two outlets.

The knapsack sprayer is an effective tool for fighting grass and brush fires. This type of sprayer holds four to six gallons of water and is often supplied with the slide type pump and an adjustable nozzle to meet a wide variety of spraying needs.



Small mobile power sprayers having tank capacities of about 15-50 gallons have many uses. Developing pressures up to 250 pounds or more and having suitable pump and agitation, they are employed in barns to apply whitewash and other water-base paints, as well as surface insecticides. Spraying livestock, large gardens and nursery and greenhouse plantings are other uses.



have you a
WEED PROBLEM

Then You Should Know More About These Two Effective Weed Killers!

BORASCU®
WEED KILLER

For dry application... destroys noxious weeds and grasses. Safe, easy to use, and economical. Noncorrosive, nonflammable, nonpoisonous and nonselective... effective on nearly all vegetation. Borascu, with all these advantages, is well known and widely recommended by weed control men.

POLYBOR-CHLORATE®
WEED KILLER

For spray application but may be used dry. Highly soluble... Polybor-Chlorate combines the plant-destroying powers of borates and chlorate; it is nonfire-hazardous!, and nonselective. Gives *quick* results on nearly all noxious weeds and grasses with some residual effect for the destruction of seedlings in the following year.

Write for FREE Illustrated Service Bulletins at Once!

PACIFIC COAST BORAX CO.®
DIVISION OF BORAX CONSOLIDATED, LIMITED
630 S.O. SHATTO PLACE • LOS ANGELES 5, CALIFORNIA

FOR THE LATEST
in
AGRICULTURAL CHEMICALS
CONSULT
ASSOCIATED
OF ST. LOUIS, MO.

●

Chloro IPC
Pre-emergence Weed Control

M-C-P
Controls Weeds In Small Grains

Penta Defoliant
Soy Beans And Cotton

Soil Conditioner
Licensed By MONSANTO Patents

Low Volatile Weed & Brush Killers
Polyproylene Glycol & Ethoxy Propanol Esters

Lindane-Chlorphenyl
Residual Insecticide

Fortified Weed Oils
General Weed Control

●

COUNTY AGENTS & VO-AG TEACHERS are invited to write for full information

ASSOCIATED SALES & SUPPLY CO.
5137 Southwest Ave.
ST. LOUIS 10, MO.

WOOD PRESERVATIVES
WOOD TOX
TIMBER TOX
CONTAIN MONSANTO'S PENTACHLOROPHENOL
available in
Ready-to-Use
and
Concentrate Form
WOOD-TREATING Chemicals Co.
5137 Southwest Ave.
St. Louis 10, Mo.

Greetings from the New NACAA President...

We are told that our population by 1975 will exceed 190,000,000 people. Farming then is "big business." To feed that number will require real thinking, working, and planning. No longer is farming a job of hand hoeing and hand weeding. We can no longer work our soil until it is unprofitable, and then move farther for new fields. That time is gone forever.

Leonard J. Kerr

To meet the need for more production of foods and feed, we must find new ways to increase our yields. We must use more fertilizers; we must use more and better machinery—to offset the labor that is no longer available on the farm; we must use better seed, hybrids, and new varieties available through our research and experiment stations; we must control insects, diseases, weeds, and grass with insecticides and chemicals.

We must depend upon the farmer for the production, the teacher (the county agent) for the correct information, the industrialist (your merchant) for the manufactured goods which increase production. We must all work together for we cannot live alone. We must learn to live with our neighbors. We can do this by working together in groups and communities, realizing the importance of our interdependence upon each other.

The county agent is a leader, a teacher, and a friend to his farmers. Our job is education . . . our problem how to reach the greatest number of farmers. With agriculture becoming more technical and more scientific, the need for teaching correct methods is more important than ever.

Our organization, the NACAA, depends upon the Land Grant college, the experiment station, and the U. S. Department of Agriculture. The officers and directors of the NACAA pledge their closest cooperation to the extension organization and policy committee of the Land Grant college.

Our NACAA committees form the basic framework of our organizational body. Through them our groups and communities will develop programs, exchange ideas. Though the committees form the framework, it is only by the help of each individual county agent that our organization can move forward. The individuals form the muscles of our NACAA body.

County agents are not only teacher . . . they are important in the field of public relations. Let us use every opportunity to bring our program before civic groups, bankers, businessmen, and educators. Such groups can be a tremendous help to us in pushing forward our program.

We cannot forget the importance of our great 4-H organization. Not only are these youngsters being helped on the way to becoming good farmers, but they are being guided on the way to good citizenship. The 4-H'ers are today developing into the rural leaders of tomorrow.

You have put your trust in us—the 1953 officers, directors, and committeemen of NACAA. We will do our utmost to uphold that trust. With your suggestions and support, we will succeed.—Leonard J. Kerr, president, National Association of County Agricultural Agents.

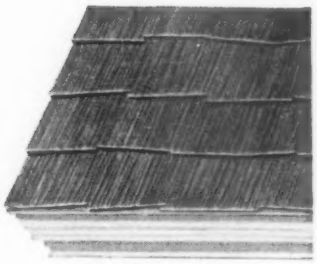
Pillsbury Mills, Inc. have staged countless numbers of demonstrations through their local dealers to further poultry culling and good poultry management. They have called these "Hen House" days and set aside one month known as nation "Hen House" month. At Wells, Minn., Faribault County Agent Fred Giesler supervised the culling contest for 4-H boys and girls. Over 500 participated. They submitted slogans, and tested their culling skill. In the above picture, County Agent Giesler, left, comments on the culling contest before a group of 4-H boys and girls.

American Colonial ASBESTOS SHINGLES

. . . add character to any home—

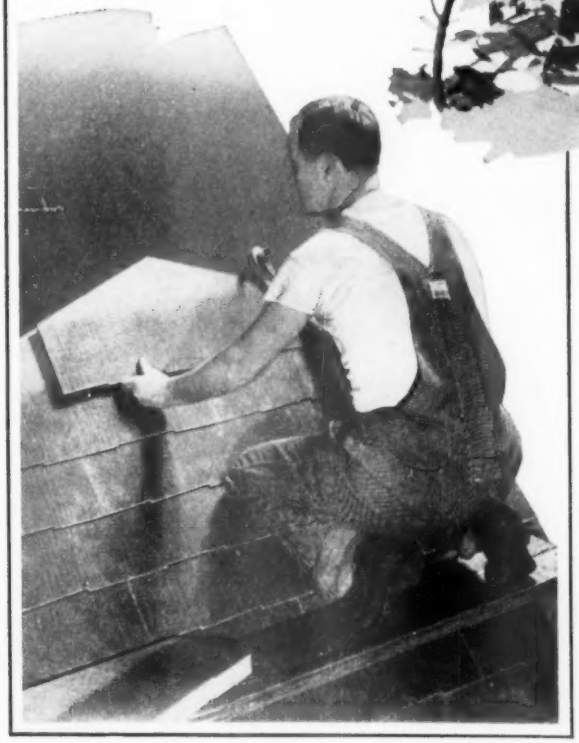
. . . wear like stone—

. . . applied like any strip shingle—



Each shingle is designed as a rigid asbestos-cement strip, covers as much area as 5 individual shingles. American Colonials are self-aligning, nail holes are prepunched. Application is simple and rapid.

The finished roof has the pleasing horizontal shadow line and deep-grained texture desired by so many homeowners.



YOU LIFT your houses out of the ordinary when you give them a roof of Johns-Manville American Colonial shingles. These handsome, colorful shingles have the rugged, sturdy and fireproof qualities of asbestos and cement. In addition, they have new styling and striking new beauty.

In most areas, the applied cost of an American Colonial shingle roof is lower than any other *permanent type* of roof you can use. The shingles are readily available nationally, easy to handle, and any carpenter can apply them. Your choice of several attractive colors. For full information write Johns-Manville, Box 60, New York 16, N. Y.

JOHNS-MANVILLE PRODUCTS JM **Johns-Manville**

Is this farm being operated at full capacity? Are the farmers in your community operating their farms at full capacity?

Ag leaders need to help their farmers establish a good farm management program. This article will give you suggestions on how to appraise such a program.

How to Appraise a Farm Management Program

By James Wallace
Agricultural Foundation Farms
Iowa State College

● "HOW DO YOU APPRAISE a farm management program?" is a question asked by an Iowa vocational agriculture teacher. All of us in the profession of agricultural education are called upon occasionally to visit a farm and suggest opportunities for improvement in its organization and management. It is time for us to pool our experience in carrying out this stimulating and important assignment.

The answer lies in a true understanding of what farm management is and in the knowledge of the trial and error methods used in the development of this science in the past 30 years or so.

The most useful (to me) definition of good farm management is "making the most effective use of available resources to achieve objectives of the operator."

The list of "objectives" nearly always includes high net income as a top priority. There are other objectives, of course, with a varying degree of importance. We can simplify this discussion by assuming the one objective is to maximize net farm income for the duration of tenure, with due regard for the risk.

In the process of visiting several hundred farms to appraise the management program we use the following sequence of mental procedure.

Determine Main Resource

First, an effort is made to determine what is the *most important* resource on *this* farm around which you can build a profitable program. This might be the high productivity of the land, the size of the farm, the quality of buildings and improvements, special markets, the ability of the operator, or the operating capital of the operator. Many others might be included in this list but these are the most common.

The next question to be answered is whether or not the operator is using this resource at full capacity. If not, what changes are necessary in order to do so?

What Is Limiting Factor?

Question No. 3 is: Every farm has some limiting factor which hinders operations. What is it on this farm? What can be done about it—if anything? This factor is usually a weakness in one of "the most important resources" listed above.

In the process of getting at answers to the above questions we tramp over the farm, make at least a mental soil map of the farm, observe the field arrangement, the livestock program, and the practices being carried out. We question the operator and from him receive an idea of past history, crop yields, soil treatments, livestock problems, sanitation measures, equipment, financial sit-

"What is the secret for a good stand of grass?"

WHEN Pete Howe popped that question I knew he had more than information on his mind. Being the County Agent, I've seen a lot of our farmers switch over to grass. Now Pete is leaning that way too. Labor shortages just don't give him time to run the rotation he is on now. And you can bet Pete will have the whole story before he puts in one seed.

So, I started mulling it over in my mind.

Finally, I said, "Pete, you're smart enough to realize grass is as much a crop as any of the grains you're growing now. Before you even turn a furrow you've got to make up your mind that grass needs the right attention. You just don't sow it and forget it.

"How you sow grass is mighty important. Sure, you can use that old grain drill — or you can broadcast the seed and some of it will grow. But that's not the way to get the most out of the seed you plant. Nor is it the most efficient, lowest cost way of getting a stand.

"Look at it this way. You wouldn't cut grain with a grass mower, would you? Well, it's the same in grass farming — you use the right tool for the job.

"And the right tool for grasses and legumes is the Brillion Sure-Stand Seeder. Don't mistake me. I'm not going commercial, but I have seen this seeder work, and I know it does the job. In fact, it does everything research and experiments say should be done when planting grass."

Pete agreed that was a good recommendation, but still didn't see how one machine could do it all.

"Wait a minute, Pete," I said, "you still have to plow and disc — and then the Brillion takes over. It crushes lumps and clods — sows grasses and legumes in combination or separately — and covers the seed within the top ½ inch of soil. At the same time, it firms the seedbed, keeping each seed close to nutrients and moisture.

"That, Pete, is the way to a sure stand. Those are the operations that have to be done for best results. The beauty of the Brillion is, it performs them all in one trip —something mighty important with help so hard to get."

Brillion

BRILLION IRON WORKS, INC., Dept. SG12-1, Brillion, Wis., U. S. A.

MORE COVERAGE PER DOLLAR *with*

RAIN BIRD Sprinklers

No. 80 Special

There's a Rain Bird Sprinkler for every agricultural requirement, with 19 different models, ranging in size from 1½ G.P.M. at 3 pounds pressure, to 610 G.P.M. at 120 pounds pressure.

As in years past, Rain Bird continues with research and testing to hold the lead with improved sprinklers that give more coverage per dollar of cost.

Our research department is at your service. Handbook and bulletins on request to county agents, teachers, and agricultural leaders.

NATIONAL
RAIN BIRD SALES & ENGINEERING CORP.
AZUSA, CALIFORNIA
L. R. NELSON Mfg. Co., Inc.
PEORIA, ILLINOIS

Important answers to "GRASSLAND FARMING" in this valuable
FREE BOOK

This interesting, fully-illustrated Gehl book answers scores of questions about making grass silage pay. It tells how to store silage in stacks, trench, top-of-ground or regular silos . . . when to cut . . . how short to chop it, and other answers, all based on actual field experience. Every farmer should have this booklet. Mail the coupon for FREE copy and we'll include colorful catalog of the

GEHL SINCE 1859

FORAGE HARVESTER

Find out why more farmers own Gehl Choppers than those of any other independent manufacturer. Learn about famous Gehl chopping mechanism, the result of Gehl's half century as specialists in feed chopping machinery. Quick change-over for 3-way harvesting, other important features.

MAIL THE COUPON NOW

GEHL BROS. MFG. CO.
Dept. MA-561. West Bend, Wisconsin
FREE: Send booklet, "Streamlined Methods of Harvesting Hay and Making Grass Silage" ☐, Gehl catalog ☐, FREE PLANS for building self-unloading wagon box, using Gehl metal parts kit ☐.
Name.....
Address.....
City.....State.....

GEHL... a good name to go "BUY"

uation and available labor.

By this time a lot of "income leaks" will be observed. The important thing is to decide *which* opportunity for improvement will have the *greatest* effect on net income. Which change should be carried out first? Which ones should follow, and in what succession?

The following suggestions will help to avoid some common mistakes and causes for confusion. Keep as your goal high net income rather than low cost of production; they do not necessarily go together. Remember labor and money are limited. If you recommend *additional* production practices, you will take time and money away from something else—

Buildings enter into a sound farm management program. This building, on a foundation farm in Warren county, Iowa, provides good economic utility.

either in production effort or leisure. Don't concentrate on one segment of the business to the extent that you lose sight of the integrated operating unit.

Appraising a farm management program is one of the most interesting and challenging tasks an educator can do. There is nothing like it to get you on your toes and to get your feet on the ground. It makes you a better "educator." Give it a try.—*End.*

(This is the second of two articles dealing with farm management. The first, entitled "The Human Side of Farming," appeared in the December issue of Better Farming Methods.—*Editor)*

★

New Chemicals Coming!

Chemists who have been active in developing antibiotics for use in feeding, new vitamins for the same purpose, new drugs for disease control, and valuable chemicals for plant use, see many new chemical developments just around the corner.

Some of these new possibilities were revealed to editors who recently spent three days in New York City as guests of the Naugatuck Chemicals Division, United States Rubber Company; Charles

FOR "PUSH-BUTTON" RAIN
Specify **HALE**

This Farmer *Weatherproofs* his crops with a HALE Irrigation Unit

WRITE TODAY—
FOR INFORMATION ON HALE IRRIGATION PUMPING UNITS AVAILABLE FOR IRRIGATING AREAS FROM 1 TO 100 ACRES AND UP. PLEASE STATE SIZE OF AREA TO BE IRRIGATED & SOURCE OF WATER AVAILABLE.

Irrigation Division
HALE FIRE PUMP CO.
CONSHOHOCKEN, PA.

Thompson
First Name in Brush Killers

"BEST KILL..."

U.S.D.A. Experts, writing of results obtained with Thompson superior low volatile esters of Bramblcide & Bramble-Weedicide report: "best kill we have observed in entire Southwest."

BRAMBLCIDE
2,4,5-T
BRAMBLE-WEEDICIDE
2,4,5-T & 2,4-D

Write for descriptive literature including latest proven application techniques on basal bark and foliage spray.

Thompson
CHEMICALS CORP.
ST. LOUIS 3, MO. • LOS ANGELES 27, CALIF.

Pfizer & Company; Lederle Laboratories Division, American Cyanamid Company; American Petroleum Institute; and Grocery Manufacturers of America. Capable industry scientists who often work in cooperation with the state and U. S. Department of Agriculture laboratories gave the latest findings and recommendations to better acquaint farm writers with the chemical age of agriculture.

Among the developments on which chemists are now working are the use of antibiotics in disease control; improvements in the effectiveness of some of the known vitamins; use of antibiotics to stimulate plant growth and control plant diseases; new chemicals to control plant growth and to control weeds and diseases. Many of these developments must undergo considerable further testing and development before they will be ready for market. But enough was shown to justify the statement of one scientist that "things of the past pale into insignificance compared with what is ahead."

This is not to say that all problems of nutrition and disease control are nearing solution, but editors were given ample evidence that research workers are working unceasingly to find solutions to many of the problems which farmers face.

★

New Teaching Kit

A new teaching kit on synthetic sow's milk, published by the Chas. Pfizer & Company, Inc., 630 Flushing Ave., Brooklyn 6, N. Y., is now available to agricultural leaders.

The teaching kit contains a series of charts for use in the classroom, 20 small booklets that contain exactly the same information as the charts and can be used to hand out to individuals, a collection of booklets and bulletins for the ag leaders use as reference material on synthetic sow's milk, antibiotics, and related subjects, and a business reply card for your convenience in ordering additional copies of the booklets.

This is an excellent teaching kit that can be used by county agents and vo-ag teachers, both in working with adult farmers and FFA or 4-H boys.

These teaching kits are available free of charge and those interested should write directly to the Chas. Pfizer & Company, Inc.

The Helpful Booklet section

begins on page 62.

These booklets are free.

Write for a quantity today.

LP-Gas goes anywhere to bring...

incineration

automatic water heating

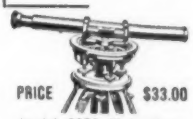
all-weather clothes drying

Instant high speed—nothing cooks as fast as gas. Dozens of heats—not just a few. Flame tailored to any utensil—no heat loss around sides of pan. Simple, easy methods—no relearning how to cook. Perfect broiling—no preheating, and no need to leave the oven door open. Instant heat shut-off—no need to grab the pot off the stove. *And with modern air-circulated, fully-insulated automatic gas ranges, kitchens are cooler, cleaner . . . living is easier.*

Whether you know LP-GAS as butane, propane, bottled or tank gas or by a local brand name, it's *Liquefied Petroleum Gas* . . . the most convenient, most dependable fuel for your farm friends. LP-GAS Information Service, Dept. BFM, 11 S. LaSalle St., Chicago 3, Ill.

You can recommend LP GAS BOTTLED TANK BUTANE PROPANE THE MODERN FUEL Wherever you are **with Confidence**

LOW-COST LEVELS for better farming



PRICE $33.00

Model 8020 Plain Type. Complete with carrying case, tripod, rod, etc.

PRICE $74.00

Model 8022 Convertible Type, (can plumb vertical lines.) Complete with carrying case, tripod, rod, etc.

• ***Recommended by leading Ag schools***

Real engineering aids for better farming... low cost, plain and convertible farm levels. Ideal for soil conservation . . . contouring, laying out drainage and tile ditches. Also for laying out building lots, foundations, roads, landscapes, gardens, fence lines, etc. Both come with complete equipment and simple, illustrated instructions. See our nearest dealer or write direct.

Illustrated Leaflet Free on Request.

DAVID WHITE CO.
389 W. COURT STREET
MILWAUKEE 12, WIS.

START THE YEAR RIGHT

Get Corriedale Sheep for increased livestock profits.

Corriedales produce top market lambs and unexcelled wool.

For descriptive literature, write:

American Corriedale Association

108 Parkhill Ave. Columbia, Missouri

The Greatest Service Organization of Its Kind in the World . . .

Near you is a Briggs & Stratton service organization — factory trained and supervised — ready to tune up, repair, or rebuild your Briggs & Stratton engines with *original* Briggs & Stratton parts.

If your Briggs & Stratton engines are not busy during these winter months, now is the ideal time to have them serviced — to insure continued peak performance.

Only Briggs & Stratton maintains such complete world-wide authorized service facilities — a big "plus" you get only when you specify Briggs & Stratton engines on the gasoline powered equipment you buy.

Briggs & Stratton Corp., Milwaukee 1, Wisconsin, U. S. A.

PIONEER DAIRY FEEDS · RED COMB POULTRY FEEDS · PIONEER HOG FEEDS

Efficient feeding programs for all livestock and poultry that produce "Quality Results at Low Cost".

WRITE FOR FREE BOOKLETS AND CIRCULARS

HALES & HUNTER CO.
141 W. JACKSON BLVD.
CHICAGO 4, ILLINOIS

MAKE MORE PROFITS UNDER AVERAGE FARM CONDITIONS —RAISE MILKING SHORTHORNS

For the average farmer, Milking Shorthorns are unbeatable. Produce 4% milk. Have greater carcass value than other breeds. Second to none in producing milk and meat from home-grown roughage and grain from your farm! Free facts. Or subscribe to Milking Shorthorn Journal. Six months, $1.00; $2.00 per year; 3 years, $5.00.

AMERICAN MILKING SHORTHORN SOCIETY
Dept. BF-8, 313 S. Glenstone Ave., Springfield 4, Mo.

County Agent No. 1?

Triptolemus— A Greek Boy

By Calvert Anderson
Extension Editor
State College of Washington

● WHO was the world's first county agent? That's a question that is often debated and many answers given. Some organizations hold that it was Squanto who helped the Indians learn a better way of planting their corn and told the white men of the Indian's method of putting a fish under each hill of corn.

Perhaps it was a Greek boy called Triptolemus who lived far back in mythological Greek history.

About 20 miles from the modern city of Athens, are the ruins of the Greek temple of Elefsis. A temple where probably agriculture was worshipped for the first time in history. There is evidence at Elefsis that the agricultural worship took place there as long as 3,000 years ago.

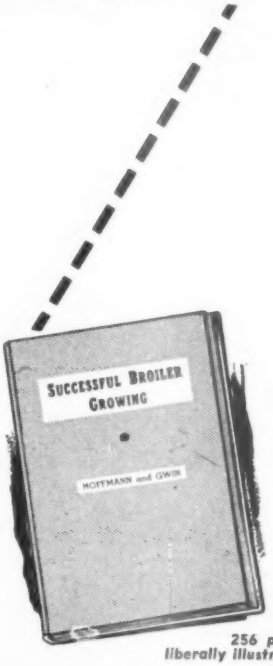
There is a positive record that the Athenians, the Greeks and later the Romans treked to Elefsis twice a year to celebrate the change of the seasons.

The story of Elefsis is interesting. It was centuries ago, when the Greek Gods traveled the earth. The Greeks had a Goddess, Demetria, who had a beautiful daughter, Persephone—they are better known to us by their Roman names of Ceres and Prosperine, so we will call them that.

One day, Ceres missed her beautiful daughter and search as she might through the realms of heaven she couldn't find her. So Ceres assumed the guise of an old lady and began a trek through all of earth, seeking her daughter, Prosperine. Late one day in the midst of a storm she came to the vicinity of Elefsis and huddled in a great hollow grotto in the rock there for shelter. She was found by a Greek family and taken into their home.

During the night, Ceres, still in the guise of an old lady, arose from her bed and picked the young son of the family, a boy called Triptolemus, from his bed and started to lay him in the hearth. The Greek mother, seeing what was happening, sprang quickly and snatched her son from the hot coals. Ceres then assumed her form as a goddess and told the woman that she was sorry of the action because she was going to make Triptolemus immortal. However, she said, after she had found her daughter

CASH for YOU
RAISE BROILERS SUCCESSFULLY



256 pages
liberally illustrated

NEW BOOK shows you how to make MONEY growing chickens for meat

Here is your chance to get into the big new $500,000,000 broiler industry . . . grow chickens for meat. This new revised edition by Dr. Edmund Hoffman, Associate Professor of Poultry Husbandry, University of Georgia, and Dr. James M. Gwin, Director of Agricultural Extension at University of Maryland, answers your questions about broilers.

Facts that mean cash in your pocket are included, covering breed selection, capital required, growth rate, feed, batteries, disease control . . . in addition to hundreds of other important points you need to know about broiler production.

ORDER your copy now!

BETTER FARMING METHODS, Box bg-3
Mount Morris, Ill.

Rush me a copy of Successful Broiler Growing, revised edition.

$3.50 enclosed. Send postage prepaid.

Name .....
(please print plainly)
Address .....
Town and State .....

she would return and teach Triptolemus the use of the plow and how to cultivate growing land.

The rest of the story is familiar to us. Ceres found that her daughter, Prosperine, had been taken into the underworld by the God Pluto. She arrived in agreement with Pluto whereby Prosperine would spend six months on earth and six months in the underworld with her husband. Prosperine descended in the fall of each year and returned in the spring. It was on those two occasions that the Athenians, the Greeks, and the Romans came to Elefsis to worship. But to return to our legend.

After Ceres had located her daughter she remembered her promise to the Greek family and returned. She taught Triptolemus how to use the plow, how to plant and cultivate seeds, and not content with that, she took Triptolemus in her chariot and went throughout the world with him teaching other people how to plow and how to grow crops better.

Does that make Triptolemus the world's first county agent?—*End.*

★

These men are the new officers of the Vocational Agricultural Teachers' association of Texas. They are, left to right, T. L. Devin, Canyon, vice-president; M. E. Keath, Sabinal, secretary-treasurer; and E. D. Ford, Taft, president.

★

Water Repellent

Prima Products, Inc., 10 East 40th St., New York, N. Y., announces a major chemical development in the cement paint and water-proofing industry.

After years of research and development work in the cement paint and silicone water-proofing field, they have developed and perfected a product called Silitex SF. It contains silicones plus metallic compounds.

It expands into an insoluble nonreversible compound that fills the pores. In addition to sealing masonry walls against seepage and dampness, it also has a highly decorative effect.

Additional information on this new product might be obtained from writing to Prima Products, Inc.

Know Your Soil
Test it with LaMotte Soil Testing Equipment
Reliable—Accurate—Easy to Operate

The result of 28 years of extensive co-operative research with agronomists and expert soil technologists.

Tests for the following available in single units or in combination sets:

Ammonia Nitrogen
Nitrate Nitrogen
Nitrite Nitrogen
Available Potash
Available Phosphorus
Chlorides
Sulfates
Iron
pH (acidity and alkalinity)
Manganese
Magnesium
Aluminium
Replaceable Calcium

Tests for Organic Matter in Soils and Nutrient Solutions (hydroculture) furnished only as separate units.

Information sent on request

LaMotte Chemical Products Co.
Dept. BFM Towson, Baltimore 4, Md.

Beats Any Other Equipment Ever Made for Tilling—Cultivating—Year 'Round Use

M-E ROTARY TILLERS

Just one demonstration proves M-E! Variable wheel and rotor speeds give controlled soil aggregation in tilling and cultivating . . . universal tines are self-sharpening, non-winding, guaranteed against breakage! 6 models . . . 15 quick and easy plug-in attachments. See and buy M-E! $188 and up.

★FREE BOOKLET
Fully illustrated Write today to M-E 323 Marion Street, South Milwaukee, Wis.

MILWAUKEE ROTARY TILLERS
Milwaukee Equipment Mfg. Co., So. Milwaukee, Wis.

Clip Ad Coupons It Pays!

Save
• TIME • LABOR
• MONEY

. . . the ALL-PURPOSE YEAR-ROUND FARM SPRAYER!

The Hanson Brodjet offers many new features to earn bigger profits for you with less time, labor and money in the new year ahead. The broad swaths (up to 54 feet) and the fast, trouble-free operation along with its low initial cost and easy maintenance make these savings possible. Its versatility enables you to handle all spraying jobs from field operation to livestock and spot spraying. Nozzles never clog and installation can be accomplished in minutes. Rough ground or obstructions are no problem because there are no complicated parts or cumbersome booms to manipulate.

Send coupon below for free details about the Hanson Brodjet and the happy and profitable new year it offers you.

Hanson Chemical Equipment Co.
Beloit, Wisconsin

Gentlemen:
Please send me, without obligation, the free folder on the HANSON BRODJET.

Name_____

Address_____ City_____ State_____

NVATA convention

Enthusiasm Ran High At . . .

Fifth NVATA Convention

(Photos by Better Farming Methods)

(See photos opposite page)

1. Negro vo-ag workers attending the convention chat with Bob Wall, extreme right, vice president, Region VI. They are, left to right, E. L. Morse, vo-ag teacher, South Hill, Va.; W. W. Craighead, district vo-ag supervisor, Richmond, Va.; and H. L. Robinson, vo-ag teacher, Princess Anne, Va.

2. Attending the annual NVATA breakfast were, left to right: R. D. Oberg, Oxford, Mich.; J. H. Mobley, Winterville, N. C.; C. T. Grable, Lovington, N. Mex.; C. B. Davenport, Mount Holly, N. J.; Leon Wagley, Deming, N. Mex.; Samuel Black, Collinsville, Ala.; and Joe Cuffman, Midland, Tex., vice president, Region II.

This is the 1953 executive committee of the NVATA. Standing, left to right, A. C. Hale, past president, Camden, Ark.; Robert Howey, vice president, Region IV, Newark, Ill.; Robert Wall, vice president, Region VI, Luray, Va.; Leon Johnson, vice president, Region III, Bemidji, Minn.; Joe Cuffman, vice president, Region II, Midland, Tex.; and Neldon Taylor, vice president, Region I, Redding, Cal. Seated, left to right, Jess Smith, treasurer, Lake Geneva, Wis.; Max Lampo, president, Neosho, Mo.; and Lionel Cross, executive secretary, San Jose, Cal. Missing is S. F. Peterson, Ayden, N. C., vice president, Region V.

3. Vo-ag leaders pause to chat a bit after their regional meeting. Left to right, Bond L. Bible, Morgantown, W. Va.; Quinten Hine, Somerset, Pa.; H. E. Throckmorton, Milton, W. Va.; and Marvin G. Collis, Accident, Md.

4. Winners in the "Exchange of Idea" contest were, left to right, Jack B. Clinch, Selbyville, Del., winning a 35 mm. camera donated by the Sears Roebuck Foundation; Tom Raine, Owatonna, Minn., winning a microscope given by the National Agricultural Supply Company, Fort Atkinson, Wis.; and Leon Wagley, Deming, N. Mex., winner of the 35 mm. projector donated by the Society for Visual Education, Chicago, Ill.

5. Featured speaker at the NVATA breakfast was Walter M. Burse, president, Suffolk Law School, Boston, Mass. Shown with him are, left to right, Milo Bacon, Norfolk County Agricultural School, Walpole, and president of the Massachusetts association; Burse; A. L. Jones, Sears Roebuck Foundation; and A. C. Hale, retiring president, NVATA, Camden, Ark.

6. A bull session gets underway with, left to right, Henry Ross, Lindon Center, Vt.; Edwin Fife, West Springfield, Mass.; Donald Watson, North Syracuse, N. Y.; L. E. Kent, South Hill, Va.; and H. E. Wright, New Brunswick, N. J.

7. Pausing for a moment after leaving a regional meeting of the NVATA are, left to right, Deane Turner, Red Wing, Minn.; Wilbur C. Foth, Westby, Wis.; M. M. Jorgenson, Lisbon, N. D.; Louis Baer, Waukee, Ia.; and James T. Wall, Waverly, Neb.

● "AS PROFESSIONAL MEN, as members of a national professional organization, leaders in the NVATA have a responsibility to see that new trends are started," stated A. C. Hale, president, NVATA.

"We need to develop the ability to grasp new ideas and opportunities that will further the profession of vocational agriculture and our position as teachers."

On this keynote, nearly 200 delegates and vo-ag teachers from 40 states gathered at the fifth annual NVATA national convention, Nov. 30-Dec. 5, Boston, Mass., to plot the ever progressive course of this young organization.

Enthusiasm, hard work, discusssion, and progressive action marked the regional and general meetings of the association.

Civil Service Aired

Once again considerable discussion centered around Civil Service retirement. Since this initial action was begun by the association several years ago, additional information brought to this convention indicated that a larger problem now existed.

Some states with good state retirement plans, others coming under Social Security requirements, and some lacking a satisfactory retirement plan moved the convention to recommend that the executive committee appoint an overall retirement committee to study all retirement proposals. This was done by unanimous action.

Delegates attending the convention had an opportunity to ballot on three proposed constitutional amendments. One significant amendment was passed by a majority vote to change the intent and meaning of the constitution in the selection of an association president each year.

No Definite Rotation

Originally, the constitution stated flatly that no one region shall have a president more frequently than one in every six years. Therefore, once a pattern was established it automatically meant that future presidents would be chosen in the succession that the first six, one from each region, were selected.

The delegates voted to change the constitution so that "it is recommended that in general during the first six-year period each region should have a president. The same principle to apply for the second six-year period, and each ensuing six-year period."

Defeated was a proposition to eliminate one vice president, have the elected president serve as a vice president from

NATIONAL FARM BOOK CO.

Viroqua, Wisconsin

Headquarters for all vo-ag and Veteran books & supplies.

REMEMBER:

(1) We allow you from 12 to 16⅔% discount on books;
(2) We ship your order by return mail;
(3) We give a free desk copy when 12 or more books of same title are ordered; and
(4) We list practically all the books on your state list. This is one deal you can't beat.

NATIONAL FARM BOOK CO.
Viroqua, Wisconsin

BOSTROM IMPROVED FARM LEVEL

Accurate, Durable and Complete for Terracing, Ditching, Irrigating, Tile Draining, Grading, Running Lines, Turning Angles and etc.

The Bostrom is used and endorsed by Schools, Extension Service & Individual Landowners everywhere.

Anyone can operate a BOSTROM Level by following the simple direction booklet included with each Instrument. We manufacture 3 models; Farm Level, Contractors Level, Convertible Level. All BOSTROM Levels are sold on the guarantee of satisfaction or money back. WRITE TODAY for literature, prices and name of our distributor near you.

Bostrom-Brady Manufacturing Co.
520 Stonewall St., S. W. ATLANTA, GA.

LONG PLAYING RECORDS

NOW 30% OFF

Except Price Fixed Records

All Long Playing (33⅓ R. P.M.) Records Guaranteed Factory New. All leading labels, including Victor, Decca, Columbia, London, etc.

RECORD HAVEN Stores

FREE CATALOG (Include 10c to Cover Mailing)

520 W. 48 St.
N. Y. 36, N. Y.

Write for Catalog 210-B

If in N.Y.C. Visit Stores at
1125 SIXTH AVENUE
1143 SIXTH AVENUE
1211 SIXTH AVENUE

his region, and to combine the office of secretary and treasurer. At present, the executive committee consists of a president, six vice presidents, the retiring president, a secretary, and a treasurer.

South Gets Summer Meeting

At the final executive committee meeting it was voted by the committee to have their annual summer executive meeting at New Orleans, preferably during the middle part of July. The committee also voted to print additional minutes of the national convention and to send these printed copies to the various states according to their membership.

Delegates displayed a keen interest in a national publicity program as proposed by Past President Jess Smith,

Past presidents attending the fifth NVATA convention pause to congratulate newly elected president, Max Lampo, Neosho, Mo., second from the left. Past president, left to right, Jess Smith, Lake Geneva, Wis.; A. C. Hale, Camden, Ark.; and Lionel Cross, San Jose, Cal.

Lake Geneva, Wis. The proposed plan, recommended by Smith and ratified by the convention body, would be to establish a national publicity chairman for the association. This would automatically become the job of the retiring president of the association. In turn, the various state presidents would act as publicity chairmen for their states and send such material to the national chairman. He in turn would forward it to magazines serving the vo-ag field and general farm magazines serving regional interests of the association.

Start 30-minute Club

A proposed "30-minute club" was approved by the convention. In this, a system of recognition would be worked out and handled on a state basis to acknowledge contributions to this publicity program by individual vo-ag teachers of the association.

All was not work at the convention. On Monday evening, Don Mullin, alternate vice president, Jefferson, Wis., had charge of the popular program "You Asked For It." Here various members of industry displayed equipment and

At the left is S. F. "Pete" Peterson, vice president, Region V, Ayden, N. C., discussing association business with Leon Johnson, vice president, Region III.

gave teachers educational material concerning related fields of agriculture.

Approximately 150 ag teachers attended. The program included a demonstration and discussion of the projectograph, an opaque projector; and discussion on the production and marketing of wool by members of the National Wool Growers' association, located in Boston.

Contest Proves Popular

Another of the highlights was a national contest on the exchange of ideas. In this contest, 30 vo-ag teachers vied for three prizes. They wrote essays of not more than 500 words on ideas which they picked up by visiting with fellow vo-ag teachers at the convention.

Winners included Jack B. Clinch, vo-ag teacher, Selbyville, Del., a 35 mm. camera donated by Sears Roebuck Foundation, Chicago; Leon Wagley, vo-ag teacher, Deming, N. Mex., slide projector, donated by the Society for Visual Education, Chicago, Ill.; and Tom Raine, vo-ag teacher, Owatonna, Minn., winner of a microscope donated by the National

Newly elected President Max Lampo, left, pauses to compare some of the "loot" that he and A. C. Hale, past president, received during the convention.

Agricultural Supply Company, Fort Atkinson, Wis.

Vo-ag teachers toured many historical spots in and near Boston on the annual agricultural tour sponsored by the Sears Roebuck Foundation. They also had their annual breakfast meeting.

Lampo New President

At the final session, Max Lampo, vo-ag teacher, Neosho, Mo., was chosen as president for 1953. New vice presidents include Robert Howey, vo-ag teacher, Newark, Ill., Region IV, and Joe Cuffman, vo-ag teacher, Midland, Tex., vice president, Region II. Cuffman was re-elected, having served out the unexpired term of J. L. Harvey, Loveland, Colo.

Alternates include Earl McKim, Michigan, Region IV, and Ed Ford, Taft, Tex., Region II.

Jess Smith was elected treasurer of the organization and Lionel Cross was re-elected executive secretary.—*End.*

★

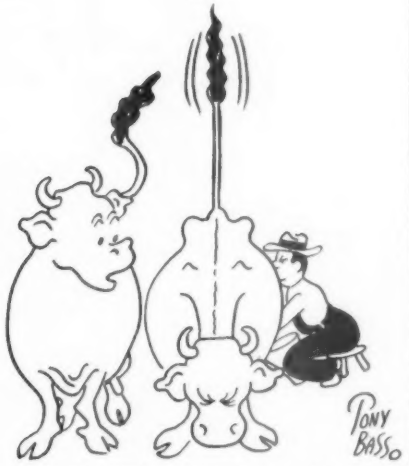
New Penicillin

A longer acting penicillin compound that makes possible the maintenance of demonstrable penicillin blood levels in various species of animals for 6 to 15 days has been developed by Wyeth, Inc., manufacturers of pharmaceutical, biological, nutritional, and veterinary products.

Known as Injection Bicillin L-A, its major utility is in prophylaxis and treatment when sustained, uninterrupted penicillin protection is desired or when a minimum of needle punctures is advantageous. By eliminating the necessity for daily injections, the new longer acting drug promises to be a time and labor saver for the farmer.

Additional information on this new product can be obtained by writing to Wyeth, Inc., Philadelphia 2, Pa.

★



"Oh-oh, still has the splinter in his finger, huh?"

These KOPPERS POSTS Have Served For 31 Years!

"...and most of them look like they'll last another twenty years"

said L. M. Moore of Grenada, Miss.

Mr. Moore checks one of several 2½" posts used in the fence.

● Mr. Moore installed a line of Koppers Pressure-Creosoted Posts back in 1921. Recently, he checked 110 of them. Despite periodic grass fires and 31 years of continuous service, nearly all of them were in good shape—and, thanks to good support, the original wire was in fine condition.

Just imagine what service like that can mean in time and money saved.

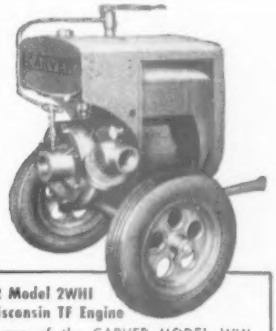
Koppers Pressure-Creosoted Posts are cut from strong, sound wood. Then, the posts are treated to average 30 years' life. Creosote is forced under pressure deep into the wood. This gives lasting protection against rot and termites, saving time, labor, and premature loss of wire.

You can recommend Koppers Pressure-Creosoted Posts with complete confidence. They are treated to average 30 years' service. For more information, or to learn where they are sold in your area, please write to us.

KOPPERS

KOPPERS COMPANY, INC., Pittsburgh 19, Pa.

"THE BEST PUMP IN THE FIELDS"



CARVER Centrifugal Pumps have earned this reputation on all types of irrigation service.

A CARVER Pump is the "best buy for better performance" for all conditions of capacity and pressure whether it be for sprinkler, open ditch, or perforated pipe irrigation.

Select your CARVER Pump from a complete line with capacities to 4000 GPM — pressures to 120 pounds. Units available with gasoline or Diesel engine or frame mounted for electric motor or belt drive.

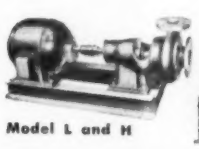
CARVER Model 2WHI With Wisconsin TF Engine

This is one of the CARVER MODEL WHI PUMPS designed specifically for high pressure sprinkler irrigation.

These units feature compact, portable mounting — exhaust priming with automatic discharge check valve — long life, greaseless mechanical seal.

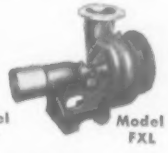
These pumps are equipped to operate the minute they are put on the job.

Write for name of distributor nearest you


Model L and H

Model WHI

Model "K"


Model FXL

CARVER PUMP COMPANY, 1444 Hershey Ave., Muscatine, Iowa

CARVER — The Quality Name in Pumps

CARVER PUMPS

Teacher's Farm Shop

Teach Farm Structures As A Part of the Vo-Ag Course

By T. J. Wakeman

Teacher-Trainer in Farm Mechanics
Agricultural Engineering Department
Virginia Polytechnic Institute

● FARM STRUCTURES is a part of the farm mechanics program we vo-ag teachers shy away from. We have left out this teaching area almost to the degree that we have farm machinery. The reason for this omission seems to be: (1) The lack of training of we teachers on the preservice level; and (2) the inability of the teachers to find adequate reference material.

It may be true that the farm boy does not have much say in the planning of farm structures. None of us could say he does not have a real opportunity in the maintenance and repair of the present day farm structures.

Adults Need Help

Training in farm structures is essential to all of our groups, all day, young farmer, and adults. The women folk should not be omitted from the adult group. It is quite desirable to teach the young girls some planning of farm structures when it can be included in the program. The following analysis is being presented in this article to assist the vo-ag teachers in planning future courses in farm structures.

Farm Structures

1. Determine the building needs and plan the farm layout using a long-time plan made in cooperation with the Soil Conservation Service.

A. Housing:—Housing requirements of dairy cattle; beef cattle; sheep; poultry; hogs; stored grains; hay; machinery and shop equipment; and miscellaneous, such as corrals, silos, and others.

B. Arrange buildings for maximum efficiency:—Performing chores; protecting crops, livestock, and equipment; and keeping capital investment at a minimum.

2. Select, read, and interpret building plans.

A. Secure available plans.

B. Choose plans for local use.

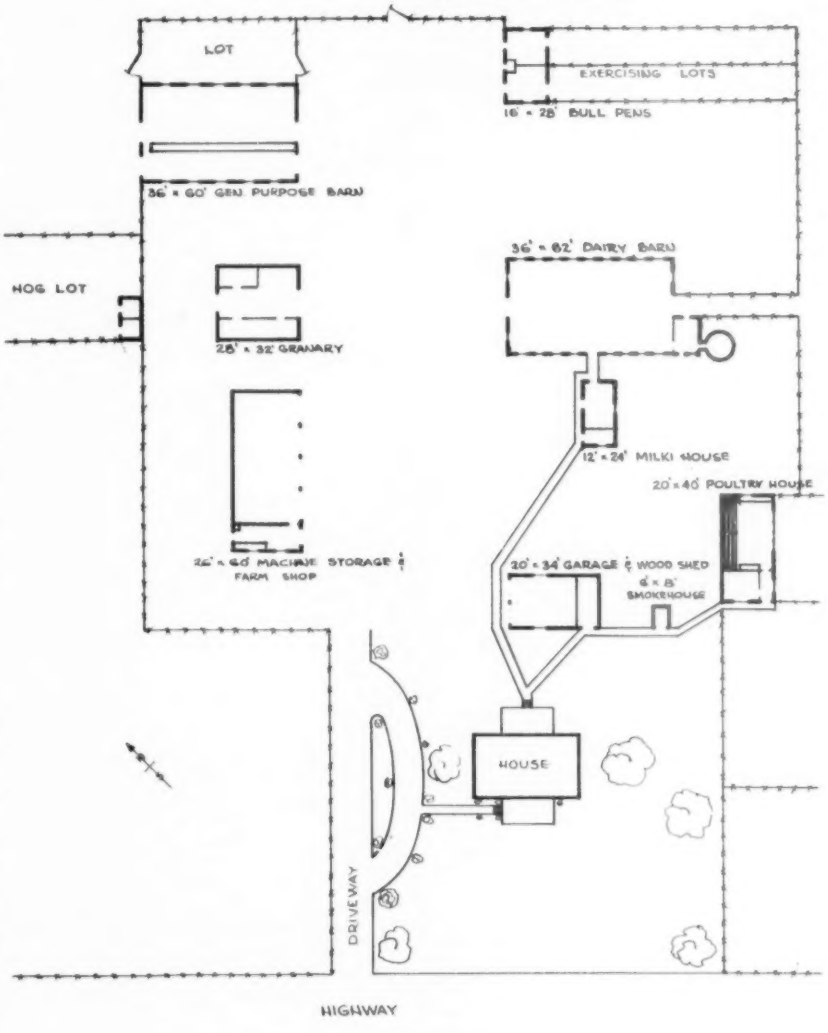
C. Read blueprints or plans:—Dimensions—exterior, interior; material symbols; electric fixtures; plumbing fixtures; construction details; and conventional plan symbols, as for windows, doors, outlets, etc.

3. Select building materials and estimate relative costs:—Lumber; masonry; roofing; insulating; hardware; and miscellaneous.

4. Recognize good construction and repair practices:—Foundations; framing and bracing; roofing; and fencing.

5. Protect farm buildings:—Against

Here is a plan for a good farmstead layout. Teachers can make this a part of their farm shop program. Adult farmers will be interested in such a course, too.



rodents; termites; weather; lightning; and fire hazards.

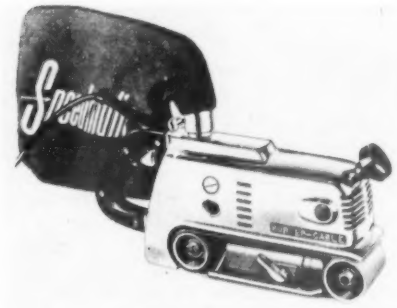
6. Keep farm buildings in repair:—Replacing rotted sills; patching roofs; clean, repair, or replace gutters; patching concrete; and adjusting doors.

7. Remodel farm buildings:—sketch the present plan; prepare a sketch of the proposed changes; plan type and details of construction; and estimate materials and cost.

8. Preserve farm structures:—Selecting preservatives such as paint, creosote, crankcase oil and metallic oxide, and others.

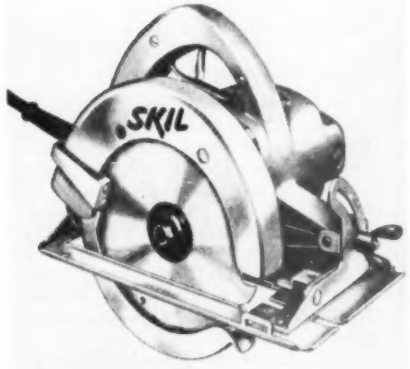
9. Fence:—Kinds; buying material; treating wood posts; erecting fence (1) bracing, (2) stretching, (3) fastening; gates; and stiles. —*End.*

★



This is a new dustless sander designed especially for rough sanding or finishing in woodworking shops. It will perform production sanding operations previously handled by heavier, more expensive machines. Made by the Porter-Cable Machine Co., Syracuse, N. Y.

★



This compact, lightweight 6-inch portable electric saw is manufactured by Skilsaw, Inc., 5033 Elston Ave., Chicago 30, Ill. It is powered by a universal type motor and has a speed of 6,000 r.p.m.

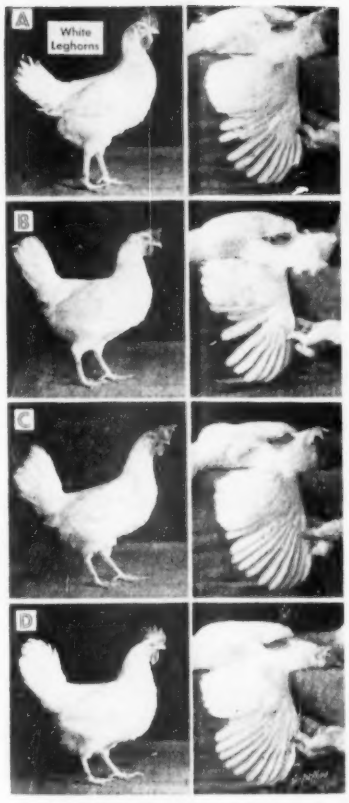
★

Coming in February . . .

Grassland Farming Section

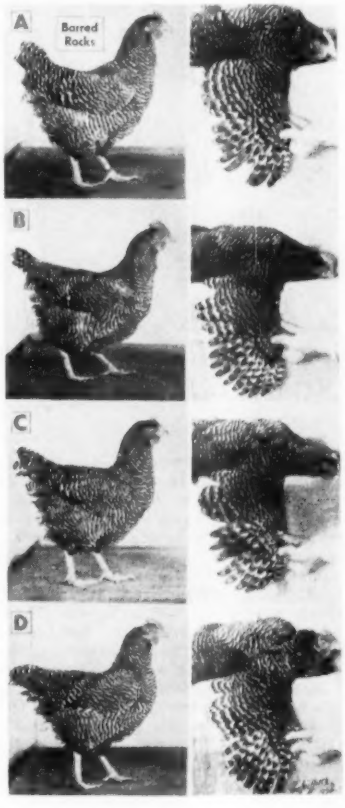
Coming in March . . .

Annual Husbandry Issue



Typical Contest Pictures

(reduced from full page size)



$400.00 PRIZE MONEY for FFA and 4-H'ers

LAST CHANCE

TO ENTER Poultry Judging CONTEST

This is your last chance to make sure that your Vo-Ag students, FFA and 4-H members enter this big Fourth Annual Poultry Judging Contest . . . sponsored by Poultry Tribune (east of Rockies) and Pacific Poultryman (seven Pacific states).

$400 in cash prizes will be awarded to contest winners. Contest is divided into senior (over 21) and junior divisions. Older Vo-Ag students, veteran trainees and farmers will also want to enter.

It's real easy . . . just rank the White Leghorns, Barred Rocks and Rhode Island Reds on basis of egg production. Actual contest pages (see reduced illustrations at left) appear in December, January and February issues of both magazines. CONTEST CLOSES FEBRUARY 14, 1953.

REPRINTS available . . .

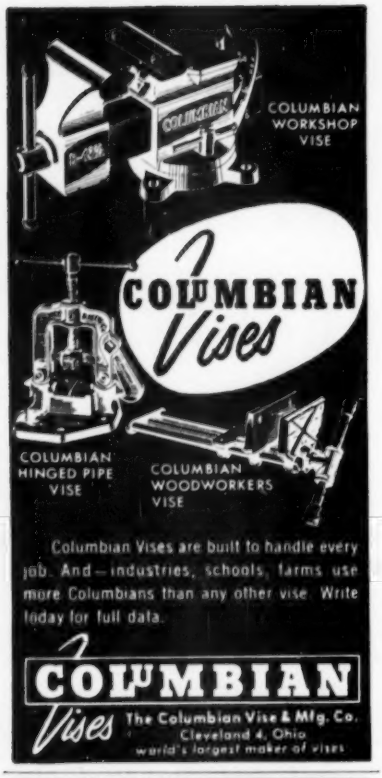
All three sets of contest pictures are available in a single folder for use by Ag Leaders. Folders make valuable teaching aids. Write for your folders containing pictures, rules and entry blank, today!

Sponsored by

NATIONAL Poultry Unit

Poultry Tribune and Pacific Poultryman

Sandstone Bldg. Mount Morris, Ill. — **Box 521 Palo Alto, Calif.**


COLUMBIAN WORKSHOP VISE
COLUMBIAN Vises
COLUMBIAN HINGED PIPE VISE
COLUMBIAN WOODWORKERS VISE
Columbian Vises are built to handle every job. And—industries, schools, farms use more Columbians than any other vise. Write today for full data.
COLUMBIAN Vises
The Columbian Vise & Mfg. Co.
Cleveland 4, Ohio
world's largest maker of vises

Fultex TARP With Your Name On It!
Ask your dealer for FULTEX TARP of 1000 uses. Turns snow, sleet or rain — triple reinforced—rust proofed grommets. Your name on it protects against loss. Card for securing your name plate and ink comes with each Fulton Tarp.
Write for booklet that tells you correct tarp sizes for trucks, machinery, etc. and how you can use tarpaulins to increase farm profits. It's free!
Fulton BAG & COTTON MILLS, Atlanta, Ga.

• COLUMBIA SHEEP •

THE ALL-AMERICAN BREED

High producers of both mutton and wool.

Especially desirable for 4-H and F.F.A. projects.

COLUMBIA SHEEP BREEDERS ASSOCIATION OF AMERICA

Alma Esplin, Secretary

P. O. Box 315 Logan, Utah

Did you see the BRODJET ad on page 53?

Patronize Our Advertisers

"Look Edgar, we cool the milk after, not before."

★

Coming Events

January 6-8—National Turkey Federation convention, Dallas, Tex.

January 12-16—The Pennsylvania Farm Show, Farm Show Bldg., Harrisburg, Pa.

February 4-15—21st annual Houston Fat Stock Show, Houston, Tex.

February 20-21—15th annual National Farm Institute, Hotel Fort Des Moines, Des Moines, Ia.

June 15-19—Florida state FFA convention, Princess Issena hotel, Daytona Beach.

June 13-17—Florida State Teachers' conference, Princess Issena hotel, Daytona Beach, Fla.

September 20-27—Eastern States Exposition, West Springfield, Mass.

★

These nine people represent a total of 225 years of service to the people of Michigan through the Michigan cooperative extension service. All nine were given silver service awards for 25 years duty at the annual conference of Michigan extension workers. They are, left to right, standing—Wayne Crampton, Manistee county agent; Harry Moxley, livestock specialist; Jack Brown, Presque Isle county agent; Arthur J. Bell, agricultural engineer, and Casper Blumer, Alcona-Oscoda county agent; seated—Arthur Howland, agricultural economist; Miss Marjorie Eastman, clothing specialist; A. W. Otterbeing, Iron county agent; and Ralph B. Coulter, Ogemaw county agent. (Michigan State College photo)

Arctic Cold Frames

A cold frame has been developed that makes use of the reflecting power of aluminum. The idea is of particular value to the far northern states where cold weather persists late into the spring months. Developed by Dr. Basil M. Bensin, former agronomist with the Alaska agricultural experiment station, the principal objective of the cold frame is to obtain additional solar energy by using aluminum. This helps increase soil temperature and creates convection air currents to warm the air. It also intensifies light.

As developed, the reflectors can be adjusted in order to adjust to various light and temperature conditions.

Bensin has several booklets available on these cold frames. They are priced at 25 cents a copy and may be obtained by writing to him, University of Alaska, Box 621, College, Alaska.

★

Welding Award Winners

Winners have been announced by the Lincoln Arc Welding Foundation, Cleveland, O., in the second annual farm welding award program for high schools. This year's winner was Marvin F. Ormonde, San Luis Obispo, Cal.

A total of 105 boys in 23 different states won awards and honors by the Foundation. The vo-ag teachers and schools of the first 10 award winners were also given certificates and cash awards. Vo-ag teachers so honored were Herbert Brownlee, Arroyo Grande Union high school, California; Will M. Seacat, Copeland, Kan.; Ray Marrison, Clay Center, Kan.; and Andrew Magyar, Mayville, Wis.

Trace Element Product

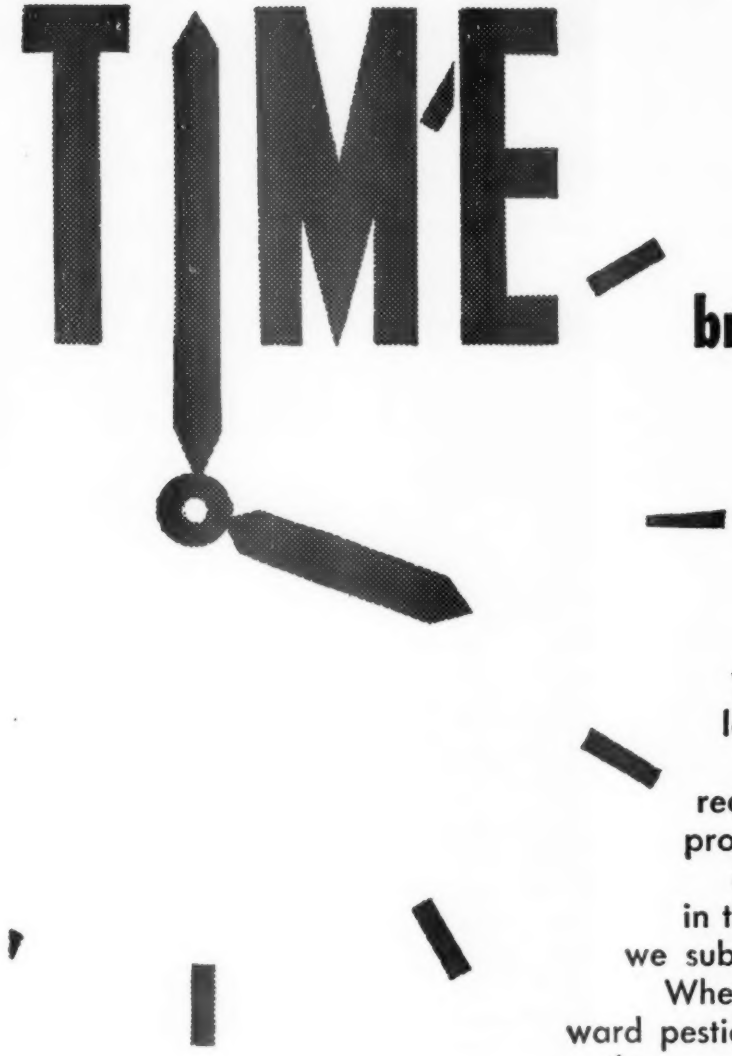
A new product, called F. T. E., is now available to the agricultural field. The product, Ferro Agricultural Frit, is a specially formed mineral containing the elements of iron, manganese, copper, zinc, boron, and molybdenum that are inducive to healthy plant growth. Frit is not a complete fertilizer in itself, but should be used to supplement normal fertilizer containing nitrogen, phosphorus, and potassium.

This is not a by-product, but is formulated and processed specifically for use as a source of trace elements.

The product will remain in the soil for the full growing season, and will not leach or react with the soil to become unavailable.

Literature on this product is available to agricultural leaders. Address your requests to Ferro Corporation, Agricultural Division, Department BFM, 4150 E. 56th St., Cleveland 5, O.

TIME brings changes



Yesterday's pesticides no longer get the job done. To keep pace with the times requires facilities, experience, productive capacity and sales coverage. Our long years in the chemical business have, we submit, afforded us all four. When you use Thompson-Hayward pesticides, you can be assured they are modern, honestly formulated, and that they will perform exactly as the label represents. What else can a pesticide be?

Ask for THOMPSON-HAYWARD Product

THOMPSON-HAYWARD CHEMICAL CO.

KANSAS CITY • NEW ORLEANS • DENVER • OMAHA • CHICAGO • MEMPHIS
DAVENPORT • WICHITA • DALLAS • HOUSTON • ST. LOUIS • DES MOINES • SAN ANTONIO
N. LITTLE ROCK • OKLAHOMA CITY • MINNEAPOLIS • TULSA • LUBBOCK

Helpful BOOKLETS

PLEASE READ THESE INSTRUCTIONS!

1. **Print your name and address on the blank lines below.**
2. **Place a check in the blank opposite the booklets you want to receive and the number of each booklet desired.**
3. **Then tear out these original sheets from the magazine and mail them to HELPFUL BOOKLETS DEPARTMENT, BETTER FARMING METHODS, MOUNT MORRIS, ILLINOIS.**

Name .....

Address .....

(An asterisk after a booklet indicates it has been added to the list recently.)

BUILDINGS

ALUMINUM CO. OF AMERICA
—"Instructions for Applying Corrugated Aluminum Roofing and Siding Sheet"
—"Paint It Bright! Paint It Right!"—How to select and buy aluminum paints.
—"Pipelines to Profit"—"Aluminum Pipe in Portable Irrigation Systems"

AMERICAN ZINC INSTITUTE
—"Facts About Galvanized Sheets"
—"Directions for Laying Galvanized Roofing"
—"Use Metallic Zinc Paint to Protect Metal Surfaces"
—"How to Make Galvanized Roofing and Siding Last Longer"
—"Spray Painting Farm Metal Roofs"
—List of Manufacturers of Metallic Zinc Paint
—"Protective Coatings for Weathered Galvanized Sheets"

AMERICAN TURPENTINE ASSOCIATION
—"How to Get the Best Paint Job"

ASSOCIATED PLYWOOD MILLS, INC.
—"Sea Swirl"*

CELOTEX CORPORATION
—"Better Farm Buildings With Celotex Building Products"*

DOUGLAS FIR PLYWOOD ASS'N.
—"Southern Farm House, Plan F2-S"
—"The Construction and Use of Re-Usable Forms for a Concrete Septic Tank"
—"The Modern Miracle in Wood"
—"Farm Building and Equipment Plans of Plywood Construction"
—"Prefabrication of Hog Structures"
—"Plywood Grain Bin Construction"
—"Modern Plywood Stock Trailer"
—"Basement Profits for Builders"
—"Twelve New Plans for Low-Cost, Damage-Proof Projects"
—"Northern Farm House, Plan F4-N"
—"Prefabrication of Small Poultry Structures"
—"1952 Basic Catalog for Douglas Fir Plywood"
—"Better Farm Buildings With Exterior Plywood"
—"Building a Plywood Silo"
—"A Portfolio of Architectural Designs for Plywood Built-ins"
—"Plastic Surfaced Plywood"

CALIFORNIA REDWOOD ASSOCIATION
—"Economical Farm Structures of Redwood"

GEORGIA-PACIFIC PLYWOOD CO.
—"Cut Concrete Form Costs With GPX"
—"GPX Plastic-Faced Plywood for Construction"

GREAT LAKES STEEL CORPORATION
—"Stepping Up Farm Production With Quonset Multi-Use Buildings"
—"Dairy Cattle Housing Demonstration and Research Project"*

JAMESWAY
—"Better Barns Book"*
—"Hand Book on Milking Parlors"*
—"Poultry Planning Book"*

JOHNS-MANVILLE CORPORATION
—"Flexboard on the Farm"

LIBBEY-OWENS-FORD GLASS COMPANY
—"Improved Farm Building Daylighting"

MASONITE CORPORATION
—"Technical Bulletin No. A-224—Masonite Tempered Presdwood"
—"Farm Folder—Out-Weather the Weather With Masonite Tempered Presdwood"

REYNOLDS FARM INSTITUTE
—"Aluminum For Farm Structures"*
—"Pole Frame Barn"*
—"Machinery Center"*
—"Low Cost Livestock Shed"*
—"Two Section 4-Sow Hog House"*
—"How to Use Reynolds Aluminum With Conventional Farm Building Plans"

REYNOLDS METALS COMPANY
—"Asphalt-Aluminum Paint or Coating For Superior One Coat Low Cost, Long Life, Roof Protection"

RUBEROID COMPANY
—"How to Give Your Barn Sturdy Side-Walls"
—"When the Wind Cracks the Whip!"*
—"Build Fast to Last with Stonewall Board"*

SISALKRAFT COMPANY
—"How to Build Dependable Temporary Silos"
—"Booklet illustrating many protective uses which will save you money"
—"The Low-Cost Easy Way to Protect Hay"

ZONOLITE COMPANY
—"The Modern Poultry House"
—"Farm Insulation With Double Efficiency"*

CROPS

DEKALB AGRICULTURAL ASS'N.
—"Acres of Gold"
—"Corn Cultivation"
—"How Thick Should I Plant?"
—"How Deep Should Corn Be Planted?"
—"Don't Judge a Kernel by Its Looks"
—(Chart) Hybrid Seed Corn and How It Is Made

FUNK BROS. SEED COMPANY
—"You Can Grow More Corn"*
—"Corn Guide Catalog"
—"Corn Data Notebook"

NITRAGIN COMPANY
—"Inoculated Legumes for Better Farming"

PFISTER ASSOCIATED GROWERS
—"Corn Guide"
—"World Record Yield Release (224.2 bu. per acre)"
—"Germ Protected Seed"

ELECTRIFICATION

GENERAL ELECTRIC LAMP DIVISION
—"Infrared Lamps Around the Farm"
—"Light for Seeing on the Farm"
—"Electrical Living R.F.D."
—"Sanitation on the Farm With G-E Germicidal Tubes"
—"Infrared Chick Brooding"*

LYON RURAL ELECTRIC COMPANY
—"Equipment Catalog"
—"Electric Beak Cauterization"
—"Electrification of Fuel Heated Incubators"
—"Plans for Outdoor Electric Brooder"
—"Plans for Indoor 100-Chick and 200-Chick Electric Hovers"
—"Plans for a 100-Egg Glass Incubator"
—"Permanent Prevention of Flying" (Wing notching of turkeys)*

SYLVANIA ELECTRIC PRODUCTS, INC.
—"Chicken and Pig Brooding With Sylvania Infrared Lamps"
—"Handy Heat for Handling Scores of Chores"*
—"Raise Your Brood the Better Way"*
—"Sylvania's Hard Glass Infrared Lamps"*

WESTINGHOUSE ELECTRIC CORPORATION
—"Electrical Farm Equipment You Can Build"
—"How to Apply Motors and Controls to Farm Jobs"
—"How to Build an Electric Motor"
—"Electricity in the Milkhouse"
—"How to Use Electric Welding on the Farm"
—"How to Apply Lighting on the Farm"*
—"1951-52 Teaching Aids Catalog"*

FEED

THE AMERICAN DRY MILK INSTITUTE
—"Dry Skim Milk and Dry Buttermilk-Feed"
—"Dry Skim Milk and Dry Buttermilk in Home Mixed Feeds"

COMMERCIAL SOLVENTS CORPORATION
—"Three Antibiotic Feed Supplements (Penbac, Baciferm-5, and Duoferm)"

ARCADY FARMS MILLING COMPANY
—"Sweet Mixing Feed"*

HALES & HUNTER COMPANY
—"Growing Broilers on a Business-Like Basis"
—"Red Comb Poultry Feed Program"
—"Pioneer Dairy Feed Program"
—"Pioneer Hog Feed Program"
—"Red Comb Turkey Production Program"

INTERNATIONAL SALT COMPANY
—"What is Blusalt?"
—"What is Greensalt?"
—"Salt on Baled Hay"
—"Get Top Profits! Farm Animals Need Salt Plus"*
—"Salt and Trace Minerals for Livestock"*

MARITIME MILLING
—"The B-B Bull Brand Dairy Feeding Guide"
—"Ma-Co Complete Poultry Guide"

MORTON SALT COMPANY
—"The Morton Way—Meat Curing Folder"*
—"Free Choice Trace Mineralized Salt for Feeding Livestock"*
—"Seasoning Recipes for Meat Dishes"*

MOORMAN MFG. COMPANY
—"A Straight Talk About the Value of Minerals"

CHAS. PFIZER & COMPANY, INC.
—"Antibiotics in Animal Feeds"*

THE QUAKER OATS COMPANY
—"You Have A Hand In Their Future" (Feeding and management of baby chicks and pullets.)*
—"Keep 'Em on the Nest" (Feeding and management of laying hens.)*
—"Boost Broiler Profits"*
—"Growing Turkeys for Profit"*
—"Boost Station Profits"*
—"Pigs Porkers Profits"*
—"Feedlot Fattening" (Beef)*
—"Winter Feeding" (Beef)*
—"Feeding for Dairy Profits"*
—"Hormone Feeding Steps Up Dairy Profits"*
—"Turn Your Grains into Profitable Feeds"*

STANDARD BRANDS, INC.
—"Sunshine and Sun-Cured Hay, How Dependable Are They As Sources of Vitamin D for Livestock"
—"How Vitamin D³ is Measured"
—"Vitamin D—Kinds and Units"*
—"What is Irradiated Dry Yeast?"*
—"Yeast and Yeast Products in Animal Feeding"*

STONE MOUNTAIN GRIT COMPANY
—"What Broiler Growers Say About Grit"
—"County Agent and Vo-Ag Teacher Educational Kit"
—"Answers to the Grit Question"
—"Information on New Stonemo Hopper-Pak"
—"Step Up Broiler Profits"
—"Start Chicks Right! Give Them 'Teeth' To Grind Their Feed"
—"Turkeys Get to Market Faster"
—"Save Feed, Get More Eggs"
—"Suggested Design For Home-Made Wooden Grit Hopper"*

VIRGINIA SMELTING COMPANY
—"Silagas, Liquid Sulfur Dioxide"*

WESTERN CONDENSING COMPANY
—"There's Magic in Whey Nutrients"
—"Your Pigs Will Thrive on 55"
—"Wet Mash Feeding for Poultry"
—"Peebles' Calf-Kit Replaces Milk!"
—"Boost Egg, Meat Production Three Ways"
—"Milk-Fed Results in Broiler Feeding"
—"Boost Turkey Production Three Ways"

FARM EQUIPMENT

AMERICAN CHAIN & CABLE COMPANY, INC.
—"Tire Sizes for Weed Farm Tractor Chains"
—"Double Your Traction"

AUTO SPECIALTIES MFG. COMPANY
—"Facts About the Latest Improvement on Tractors"*
—"Revolutionary Wigle Hoeing Attachment"*

Colleges

ALFALFA PELLETS—Should alfalfa pellets be fed dairy cattle for a roughage or a concentrate? A recent experiment station bulletin from the Agricultural Experiment Station, University of Wyoming, attempts to answer this question. Pellets of high-grade alfalfa hay are a clean and easy way to feed alfalfa in adverse weather. They are usually fed as roughage, but because some producers mix them with grain and feed as concentrates, the study was made to evaluate pellets as part of the concentrate feed allotment. The conclusion drawn from the study was that "feeding dehydrated alfalfa pellets as a concentrate to dairy cattle becomes an economic problem, to be dealt with in terms of cost of total digestible nutrients as well as labor saving in handling."

LADINO CLOVER VIRUS—A disease that has plagued ladino clover during the past year has been identified as a virus by Virginia Polytechnic Institute workers. The virus affecting ladino clover is the same one as found on alfalfa and many other clovers commonly grown on the farm. The reason this disease has not previously caused serious damage to ladino clover is probably because the virus is not carried in the seed. After ladino is grown on a farm for several years, the virus is apparently spread from nearby leguminous crops that carry the virus. No control is known at this time for it.

NEW OAT VARIETY—A new variety of high-yielding winter oats with extra straw stiffness has been released to certified seed growers by Purdue university agricultural experiment station. The new winter oat has shown outstanding resistance to lodging. It has been named Dubois.

POST TREATMENT—Oregon State college has been investigating a new method for treating farm fence posts. The method consists of soaking green wood in two solutions of chemicals. These chemicals react within the wood to form a preservative compound that does not leach out. Although it is still in an experimental stage, preliminary results on Southern pine have indicated the merits of this treatment. Several different chemical combinations are being investigated. As soon as more detailed information is obtained, the facts will be made known to farmers.

SHEEP—The advantages of feeding grain to ewes during pregnancy were not sufficient to offset the greater cost of the feed, according to tests at the University of Missouri. However, feeding the ewes two pounds of grain mixture each day for the last two months of pregnancy did cause the ewes to gain more and resulted in noticeably heavier lambs at birth. They also weighed slightly heavier at 20 weeks of age. Milk production also increased with those fed grain during the last two months.

CROPS—Clintafe oats, a new variety, is being released this fall in Iowa and some nearby states, reports Iowa State college. This new variety was produced by breeding and selection at the Iowa experiment station in cooperation with the USDA and other state experiment stations. It is not a super variety, but it is resistant to Crown rust, has more tolerance than most varieties to Septoria black stem, and is resistant to Helminthosporium blight.

DEFOLIATED CROPS—There is risk involved in feeding defoliated field crops to livestock. According to Colorado A & M college, manufacturers of defoliants have indicated that while foliage from feed crops treated as recommended will not injure livestock if accidentally ingested, the foliage should not be used for feed or forage. Questions arose with the use of toxic dinitro compounds in clover and alfalfa seed production. The same precautions probably should be observed when applying defoliants using pentachlorophenol.

(Please turn the page)

Please send me copies of the following "Na-Churs" Plant Food Company insert that has been published in Better Farming Methods.
.....copies of "A Progress Report on Liquid Fertilizer."

AMERICAN CROP DRYING EQUIPMENT COMPANY
—"The New American All-Crop Dryers"

ALLIS-CHALMERS MFG. COMPANY
—"Making Paydirt Last"
—"New Roto-Baler"
—"The Allis-Chalmers Model G Rear Engine Tractor"
—"Power Driven Side Delivery Rake and Tedder"
—"New Allis-Chalmers Forage Harvester and Forage Blower"•
—"Allis-Chalmers Model CA Tractor"•
—"Allis-Chalmers Model WD Tractor"•
—"It Pays To Own an All-Crop Harvester"•
—"Two-Way, Two-Furrow, Spinner Type Plow"•

BRILLION IRON WORKS, INC.
—"How Brillion Makes Grassland Farming Really Successful"
—"The Brillion Line of Soil Pulverizers"
—"The Brillion Pulvi-mulcher for Preparing All Seed Beds"•
—"Figure It Out for Yourself"•

BURROWS EQUIPMENT COMPANY
—"Free Catalog on Grain Testing Equipment"

J. I. CASE COMPANY
—"Storage Curing of Baled Hay"
—Catalog on Visual Education Materials
—"Water Spreading"
—"Level Farming on Sloping Fields"
—"Win Against Water"
—"Build A Pond"
—"Moldboard Terraces"
—"Strips and Curves"
—"More Food From Fewer Acres"
—"How to Produce High Protein Hay"
—"Handling Manure for Extra Benefits"
—"Advanced Farm Practices"
—"Modern Farm Machines Bring Back the Range"
—"Pageant of Progress"•
—"One Acre Equals Four Acres" (Modern Pasture Improvement)•
—"Visual Aids to Modern Farming"•

Service Charts—24 x 36 inches:
—"Easy Plan for Building Your Own Terrace"
—"Contour Farming Pays in Three Main Ways"
—"The Island System of Terracing"
—"Build A Pond"
—"Strip Cropping Increases Yield"
—"New Life for Your Land"
—"Sectional View Model D Engine"
—"Sectional View Model S Tractor Transmission"
—"Sectional View Model LA Tractor"
—"Operation Principles Four-Cycle Engine"
—"Know Your Carburetor"
—"For Best Power Take-Off Performance"
—"Combine Sectional View—Model A"
—"The Saga of Sawdust Sam" (safety)
—"Community Leaders"
—"Tractor Sectional View Model VA Series Models"
—"Combine Sectional View Model F-2"
—"Hydraulic Controls"
—"Money Crops—New and Old"•
—"Rebuild Old Pastures and Get Four Acres' Yield From One"•

Please send me copies of the following Commercial Solvents Corporation insert that has been published in Better Farming Methods.

————copies of "New Antibiotic Pellet For Hog Production."

CONTINENTAL STEEL CORPORATION
—"Grassland Farming"
—"Practical Plans for Modern Farm Buildings"
—"Farm Improvement Guide"
—Handy Pocket Record Book

CENTURY ENGINEERING CORPORATION
—"Spray Your Way to Greater Profits"•

CLAY EQUIPMENT CORPORATION
—"What the Modern Crop Drier Means to You"•

DEERE & COMPANY
—"Better Farming" (Catalog)
—"Soil Conservation"
—"Hungry Soil"
—"How to Terrace With Moldboard Plows and Disc Tillers"
—"How to Fight Corn Borers"
—"Harvesting and Feeding Chopped Hay and Grass Silage"•

DRAVO CORPORATION
—"Dravo Crop Driers"•

THE FARM FENCING ASSOCIATION
—"Fencing For Your Lifetime"

FARMER FEEDER COMPANY, INC.
—"Self-Feeding and Watering Your Hogs"
—"Importance of Barnyard Equipment"
—"Fast and Simple Way to Apply Top Dressing"
—"Broadcasting Cover Crops"

FYR-FYTER COMPANY
—"The Chemistry and Control of Fire"•

GEHL BROS. MFG. COMPANY
—"Streamlined Methods of Harvesting Hay and Making Grass Silage"•
—"Forage Harvester With Quick Change-Over for 3-Way Harvesting"•

H. D. HUME CO.
—"Hume Reel Harvests More Grain From Any Field"

HANSON CHEMICAL & EQUIPMENT COMPANY
—"Hanson Brodjet, the All-Purpose Sprayer"•
—"More For Your Money With Hanson Brodjet"•

INTERNATIONAL HARVESTER COMPANY
—"The Story of Twine in Agriculture"
—"Land of Plenty"
—"More Productive Gardening"

MASSEY-HARRIS COMPANY
—"Massey-Harris Plows"
—"Massey-Harris Manure Spreaders"
—"Massey-Harris Haying Tools"
—"Better Built Tractors"
—"Massey-Harris Combines"
—"Weed and Insect Sprayers"

MEYER MFG. COMPANY
—"The Meyer Hay Conditioner"

MILWAUKEE EQUIPMENT MFG. COMPANY
—"What Rotary Tillage Will Do For You"
—"Second Frontiers"•

F. E. MYERS & BROS. COMPANY
—"Myers Water Systems and Pumps (MS-51)"•
—"Myers Power Sprayers (PSC-53)"•
—"What Everyone Should Know about Soft Water (WCC-52)"•
—"Soft Water Is Needed on the Farm"•

NEW IDEA FARM EQUIPMENT COMPANY, subsidiary, AVCO MFG. CORPORATION
—"Tried and New Ideas For Handling Barnyard Manure"
—"Marching Ahead With Corn"
—"New Idea Manure Spreaders"
—"New Idea Hay Tools"
—"New Idea Corn Harvesting Tools"
—"New Idea Elevators"
—"New Idea Farm Wagons"
—"New Idea Horn All-Steel Wagon Box"•
—"New Idea Horn Hydraulic Loaders"•

RITE-WAY PRODUCTS COMPANY
—"Rite-Way Field-Tested Swing Milker"•

ROBINSON VENTILATING COMPANY
—"Robinson Fans for Drying All Farm Crops"•

Industry

NITROFURAZONE — This chemical is effective in controlling swine necro, a disease responsible for heavy losses of pigs. Relatively a new chemical, it is derived from farm wastes and has already demonstrated its effectiveness against coccidiosis of poultry. It is used widely in medicated starting and growing mashes fed to poultry. Further information on this chemical can be obtained from Dr. Hess & Clark, Inc., Ashland, O., who have done research work with nitrofurazone.

TERRAMYCIN — The discovery that infinitesimal quantities of the antibiotic terramycin cause a significant stimulation in the growth of sweet corn and other plants has been made public by Chas. Pfizer & Company, Inc., Brooklyn, N.Y., pharmaceutical firm whose scientists discovered terramycin. This antibiotic has been widely used for stimulating growth in livestock and poultry. In this application to plants, it was reported that antibiotics increased percentage of seed germination. This may open a vast new field for the use of antibiotics in agriculture.

HOME MEAT CURING — The Morton Salt Company, 120 South LaSalle St., Chicago 3, Ill., has within recent months developed an easy way of "kitchen curing" fresh or unfrozen cuts of meat. Through using this method, a great variety of ways to prepare and use cuts of meat has been developed for the housewife. A new folder presenting a great number of recipes and methods for applying this kitchen curing method in the home is available from the company. Copies of it may be obtained by writing to their Chicago office.

FUNGUS — "Manzate" fungicide, manufactured by the DuPont Company, controlled all the prevailing diseases of tomatoes in a three-year test at the agricultural experiment station at Wooster, O. This fungicide gives promise of being the nearest approach yet found to a fungicide that can be used singly to check those diseases.

X-RAY—Westinghouse Electric Corporation has developed a new grain inspection X-Ray unit. It is being used to detect wheat weevil. A handful is placed in a tray and radiographed. After developing, the picture is read for black surface specks that result from newly-laid weevil eggs. It also detects larva that have burrowed inside the shell.

★

Be Wise . . . Buy Bonds

PEIRSON-MOORE COMPANY
—"Making Every Crop A Sure One With an All-Purpose Farm Drier"
—"Making Rich Green Hay With Farm Driers"
—"Avoiding Crop Losses With a Farm Moisture Tester"
—"How to Cure Bright Leaf Tobacco"
—"Wagon Drying Comes of Age"•

ROTOTILLER, INC.
—"A Little Power—A Lot of Living!"•

SEAMAN'S MOTORS, INC.
—"Benefits of Rotary Tillage"
—"The New Seaman Tiller"

SEEDBURO EQUIPMENT COMPANY
—"Farm Size Vac-A-Way Seed and Grain Cleaner and Grader"

D. B. SMITH COMPANY
—"Indian Back-Pack Fire Pumps"
—"Smith Sprayers"

STOODY COMPANY
—"Stoody Farm Hard-Facing Handbook"

SUPERIOR SEPARATOR COMPANY
—"How You Can Cut Haying Costs . . . Dollars Per Ton!"

TRACTOR SPECIALTIES, INC.
—"What Every Farmer Should Know"•

WORLD INDUSTRIES, INC.
—"The New, All-Purpose World Sprayer"

BREED INFORMATION

AMERICAN BRAHMAN BREEDERS ASSOCIATION
—"Brahman . . . World Wide Adaptability"•
—"Brahman, the Short Cut to More Beef and Profit"•
—"Brahman Cattle in America"•
—"Brahman Blood for Beef"•
—"Brahmans Build Better Beef"•
—"History of Brahman Cattle in the United States"•

AMERICAN CORRIEDALE ASSOCIATION
—"You Too Will Like Corriedale Sheep"
—"Fifteen Reasons Why Corriedales Excel"•

AMERICAN GUERNSEY CATTLE CLUB
—"Liquid Gold"•
—"Where to Buy Guernseys"

AMERICAN HEREFORD ASSOCIATION
—"Recording and Transferring Herefords"
—"Plan and Profit With Herefords"
—"If You Have Land and Grass"•

AMERICAN JERSEY CATTLE CLUB
—"Jersey Judging Made Easy"
—"Jersey Milk"
—"Jersey Breed Improvement Programs"•

AMERICAN POLLED HEREFORD ASS'N
—"Polled Hereford Winners"
—"Rules Governing Registering and Transferring Polled Herefords"

AMERICAN MILKING SHORTHORN SOCIETY
—"Rules for Herd Classification"
—List of Breeders of Milking Shorthorns
—"Pointers for Prospective Breeders"•
—"Rules for Grading up the Herd"•
—Booklets on both Polled and Horned type Milking Shorthorns•

AMERICAN SHORTHORN BREEDERS' ASS'N
—"Ideal Type Shorthorn Bull"•
—"Ideal Type Shorthorn Female"•
—"Ideal Type Polled Shorthorn Bull"•
—"Ideal Type Polled Shorthorn Female"•
—"1947 International Grand Champion Steer"•
—"International Shorthorn Champion Load of Fat Cattle"•
—"Steps to Success"•
—"Visual Demonstrations in Shorthorn and Polled Shorthorn Selection"•
—"Manual of Rules of Registry and Information"•

BREEDERS EQUIPMENT COMPANY
—"The Kissileff Bovine Inseminator"
—General Catalog No. 103 (Instruments and Supplies for Artificial Insemination of Animals)•

HOLSTEIN-FRIESIAN ASS'N OF AMERICA
—"Holstein Facts in Black and White"
—"Condensed History of the Holstein-Friesian Breed"
—Colored pictures of True Type Holstein-Friesian Cow and Bull, Small

HY-LINE POULTRY FARMS
—"How Hy-Line Chicks Are Bred"
—"Chick Management—Building Profitable Layers"•
—"How to Manage Your Hy-Line Layers"•

NORRIS CATTLE COMPANY
—"Throughout the World Brahmans Build Beef"

NICHOLS POULTRY FARM, INC.
—"Practical Management of Nichols New Hampshires for Hatching Egg Production"
—Nichol's catalog
—"Management Guide for Hatcherymen and Flock Owners"•

UNITED DUROC RECORD ASS'N
—"Duroc Picture Judging Booklet"
—"Profits Plus"•

SOILS

TENNESSEE CORPORATION
—"Essential Mineral Elements"
—"The Value of Rarer Elements In Plant Nutrition"

IRRIGATION

W. R. AMES COMPANY
—"Roto-Rain Revolving Sprinkler Systems"•
—"Perf-O-Rain Low Pressure Overhead Sprinkling"•
—"Gated Surface Pipe-Controlled Furrow Watering"•
—"Syphons & Furro-Tubes-Improved Ditch to Field Watering"•

BUCKNER MFG. COMPANY
—"Buckner Irrigators, A Complete Line of Irrigation Sprinklers"

THE DEMING COMPANY
—"Deming Pumps For Irrigation Service"
—"How to Select Your Water System"

GOULDS PUMPS, INC.
—"Goulds Irrigation Pumps"

HALE FIRE PUMP COMPANY
—"Data on Irrigation Pumps"

THE GORMAN-RUPP COMPANY
—"Irrigation at Malabar Farm"
—"Gorman-Rupp Irrigation Pumps"

MARLOW PUMPS
—"Self Priming Pumps for Farm and Irrigation"
—"Marlow Sprinkler Irrigation Pumps"

RAIN BIRD SPRINKLER MFG. CORP.
—"Sprinkler Irrigation Handbook"•

REYNOLDS METALS COMPANY
—"More Income Per Acre With Portable Sprinkler Irrigation"

SKINNER IRRIGATION COMPANY
—"Skinner System Agricultural Sprinklers For Portable Lightweight Pipe"

STOUT IRRIGATION, INC.
—"Engineering and Designing a Portable Sprinkler Irrigation System"

YARDLEY PLASTIC COMPANY
—"Yardley Plastic Pipe Rigid Type M-6 For Handling Water, Chemicals, and Industrial Wastes"
—"Yardley Plastic Pipe Rigid Type G/P For Handling Manufactured and Natural Gas and Petroleum Products"
—"Yardley Plastic Pipe Flexible Type M-2 For Jet Wells and All Other Cold Water Installations"
—"Plastic Pipe Business Is Growing"
—"Yardley Plastic Pipe (Rot, Rust, and Corrosion-Proof)"

VISUAL AIDS

DA-LITE SCREEN COMPANY
—"Planning for Effective Projection"
—"Projection Data Card"•

BELL & HOWELL
—"Movies Go To Work"•
—"Learning Unlimited"•
—"Free Film Sources"•
—"Architects Visual Handbook"•
—"Teaching Eternal Truths"•
—"Movies Change Their Voices With Filmosound 202"•
—"Business & Industrial Movies Change Their Voices With Filmosound 202"•
—"Educational Movies Change Their Voices With Filmosound 202"•
—"Religious Movies Change Their Voices With Filmosound 202"•
—"Tips on Making Your Football Movie"•
—"Tips on Christmas Movie Making"•
—"Tips on Movie Camera Lenses and Filters"•
—"Tips on Editing and Titling Your Home Movies"•

DEVRY CORPORATION
—"Suggested Bibliography on 'The Use of Motion Pictures in Education'"
—"Suggestions for Organizing Student Operators' Club for the Projected Teaching Aids Department"
—"Re-Using Audio-Visual Materials"
—"Suggestions for Effective Techniques of Utilizing Motion Pictures in the Classroom"
—"Suggestions for Organizing a Functioning Audio-Visual Teaching Aids Department"

RADIANT MFG. CORPORATION
—"More Brilliant Projection"

THE VENARD ORGANIZATION
—"Source List of Films"

RADIO CORP. OF AMERICA
—"Information on the RCA 400 Sound Projectors"
—"Accordion-Fold Brochure on RCA '400' Junior-Senior Projector"•
—"RCA" "400" Junior Projector Catalog Sheet•
—"Flexibility of RCA 400 Projection Line"•
—"RCA 400 Magnetic Sound Projector"•
—RCA Sound Products Catalog

VICTOR ANIMATOGRAPH CORPORATION
—"Blue Print for an Audio-Visual Program"
—"Specifications on Victor 16 mm. Sound Projectors"
—"Where to Get Films and Film Information"
—"The Power of the Film"
—"How to Get Best Results When Showing a Movie"
—"Classroom Prepared for Audio-Visual Aids"

★

★

Patronize the Advertisers in Better Farming Methods

For What It's Worth

By HERBERT L. SCHALLER, Editor

A New Year's Thought

Across my desk the other day came a short statement from the Chaplain, Blackhawk Area Council, Boy Scouts of America.

It is entitled "Just For Today—I Pray." In your job of leading farm people, sharing some of their responsibilities and anxieties, perhaps this bit of inspiration will help you.

"There are two days in every week about which we should not worry—two days which should be kept free from fear and apprehension.

"One of these days is yesterday, with its mistakes and cares, its aches and pains, its faults and blunders. Yesterday has passed forever beyond our control. All the money in the world cannot bring back yesterday. We cannot undo a single act we performed; we cannot erase a single word we said.

"The other day we should not worry about is tomorrow, with its possible adversities, its burdens, its large promise and performance. Tomorrow also is beyond our immediate control. Tomorrow's sun will rise either in splendor or behind a mask of clouds—but it will rise. Until it does, we have no stake in tomorrow, for it is yet unborn.

"That leaves only one day—today. Any man can fight the battles of just one day. It is only when you and I add the burdens of those two awful eternities—yesterday and tomorrow—that we are liable to break down."

Farmers Use Chemicals

According to a recent release by the National Agricultural Chemicals association, based on 1951 figures, farmers spend about 1 percent of the value of all farm sales for pest control materials. This amounts to some $300,000,000 annually.

In addition, farmers purchase some 100,000 power sprayers and dusters annually, of which about 80 percent are field or row crop sprayers. Also, approximately 1,900 operators with some 5,500 airplanes are available for custom spraying and dusting work.

This, indeed, indicates that the field of agricultural chemicals has grown by leaps and bounds.

In January, 1950, recognizing the growing importance of chemicals to agriculture, Better Farming Methods attempted to bring current information on agricultural chemicals to ag leaders. We have continued this annual emphasis on chemicals.

This represents our fourth attempt to briefly bring to you some of the outstanding developments, methods of application, and future predictions in this field.

If there is any one point that needs stressing above all to the field of agricultural chemicals, it would be—SAFETY!

"Is it understood then, fellows? Odd man has to explain the theory of Hybrid corn breeding to Cornelius!"

One of the fundamental fields of education that all agricultural leaders should pursue diligently is the field of adequate safety information.

Benson—Above Reproach

The new Secretary of Agriculture, Ezra T. Benson, may not be well known, but to all who do know him, he is enthuiastically received.

"Ezra Taft Benson has the lifelong habit of integrity:"—Wm. I. Myers, Dean, College of Agriculture, Cornell University. "For goodness sake be for this fellow. He has the ability, training, character, understanding, integrity, and humility needed for the job:" —Ben Brumley, former president, National Livestock Producers Association. "We are thrilled that a man of his caliber, integrity, and spirituality has been appointed to the important post of Secretary of Agriculture:" — Arthur Schuck, Chief Scout Executive.

In the April issue of Better Farming Methods, I quoted directly from a talk given by Benson at Farm and Home Week, University of Wisconsin. Look at it again. Read it carefully, and you will see that Benson has the outlook, integrity, and principle necessary to serve, and serve well, the American farmer. If you haven't a copy of this editorial, write to me and I will send you one.

He is a former county agent. He knows farmers. He is a leader. He knows agriculture. He also knows right from wrong.

All agricultural leaders should rally to his support.

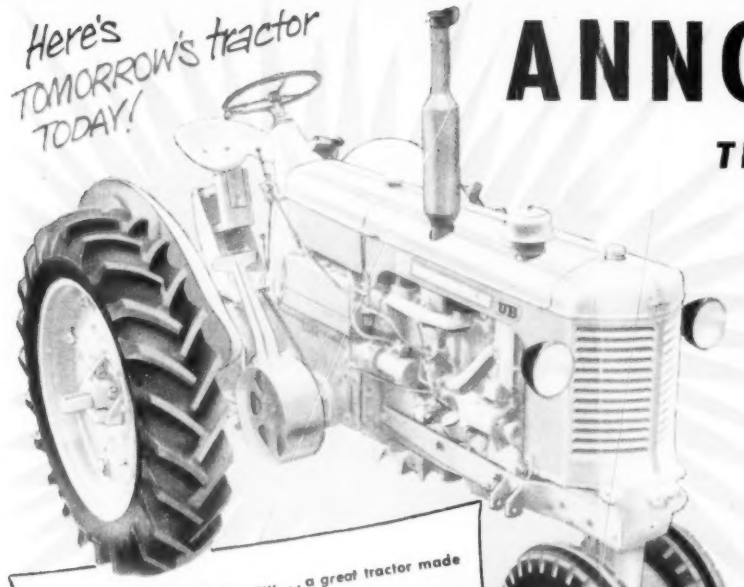
HLSchaller

Here's TOMORROW's tractor TODAY!

ANNOUNCING

THE *NEW* MODEL

UB



Here's a tractor with MORE MUSCLE... a tractor that's EASIER TO OPERATE... SAFER and MORE COMFORTABLE!

it's the NEW...

MINNEAPOLIS-MOLINE MM MODERN MACHINERY model **UB**

Here's the newest of the new . . . a great tractor made even greater!
Now, the new, advanced MM Model UB Tractor offers far more than ever before. MORE power! EASIER handling! NEW safety! GREATER economy! LONGER-LIFE features that mean even bigger value for every farmer's tractor dollar.
Read through the advantages listed below. See how much more today's farmer gets with the new, advanced Minneapolis-Moline UB Tractor.

THESE ADVANTAGES MEAN MORE POWER, COMFORT, LOWER COSTS, REAL SPEED IN THE FIELD!

1 MORE POWER! Higher compression cylinder heads, greater compression ratio offer *more horsepower* with *new fuel economy*! PERFORMANCE that adds up to *less time* in the field, *more work done*!

2 NEW HIGH PLATFORM! This one big feature provides greater visibility, puts the operator up away from dust and heat, provides ample standing room for a change of pace while driving the tractor. Platform gives a *safe, solid* foundation for new tractor seat.

3 NEW IGNITION SYSTEM! Double the voltage output means easier starting. New position for battery means easier servicing. Sealed beam headlights make night work easier, road travel safer.

4 NEW STARTER! The Model UB will start time and again where other tractors fail. Shorter cables cut down power loss.

5 NEW CENTER LINE STEERING and "needle bearing" universal joints deliver the most responsive, easy to control tractor on the market . . . equal vision on both sides of tractor. Throttle is right under the steering wheel.

6 NEW SAFETY FEATURES include shield over hydraulic Uni-Matic jack, complete protection from working parts of Uni-Matic and PTO attachments.

7 NEW PRESSURE COOLING! Now the UB Tractor has a cooling system like most automobiles . . . sealed system cuts out anti-freeze losses.

8 AUTOMATIC WEATHER CAP keeps moisture out of your tractor, stays open automatically while tractor is operating.

9 NEW FLOTE-RIDE SEAT! Never before such *comfort!* New seat pan, new springs to take the shock, new hydraulic cylinder to absorb the rebound . . . weight, distance from steering column, and furrow leveling adjustments. Seat can be flipped back if operator wishes to stand.

10 NEW FOOT CLUTCH is located to the left of the steering column. Large capacity clutch and long pedal make operating easier.

11 NEW BRAKE SYSTEM! Longer brake pedals (both on the right side of the steering column) . . . disc type brakes that operate on the transmission countershaft . . . close spacing that eliminates locking pin . . . brakes that can be locked in "on" position by foot lever. UB brakes are advanced, respond faster—typical of a tractor that's ahead in so many ways.

12 NEW ROLLER DRAWBAR that can be locked in place or allowed to roll free.

13 LIVE POWER TAKE-OFF! Live PTO lever is convenient to operator. Pulled back, lever disengages tractor wheels but allows PTO shaft to turn and clear clogged or jammed PTO implement. Live PTO is optional equipment on the new UB.

14 EXTRA CAPACITY FUEL FILTER.

15 STELLITE EXHAUST VALVE INSERTS for best high compression performance, longer wear.

16 NEW, STRONGER "BOSSES" on side of transmission case provide far greater strength for front-mounted loaders or implements.

17 LIKE DRIVING THE LATEST MODEL CAR! MM has designed the new UB to place the steering wheel, throttle, clutch, and brake pedals right in front of the operator where they are naturally and easily reached . . . yet the UB keeps the exclusive MM Visionlined design.

MINNEAPOLIS-MOLINE MINNEAPOLIS 1, MINNESOTA

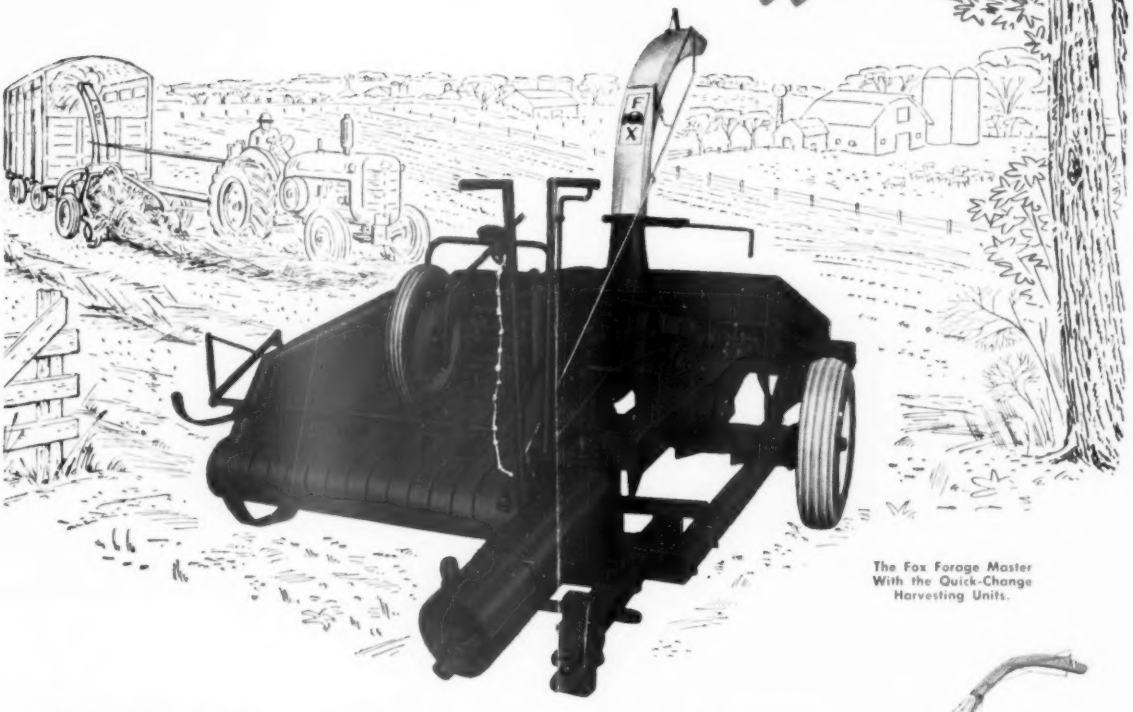
It takes that UB power bonus to hold plowing costs to the very rock bottom.

Here's the Model UB factory-equipped to burn LP gas. Farmers everywhere are cutting costs with MM's advanced LP gas system.

Operator stands if he wants to. The big, safe platform on the new Model UB gives plenty of space for a change of pace.

FOX

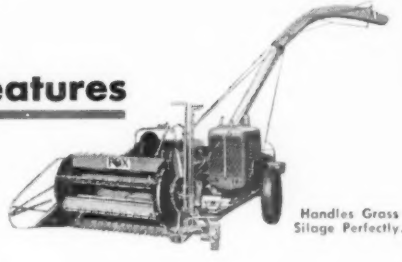
THE FORAGE HARVESTER THAT'S *Different*



The Fox Forage Master With the Quick-Change Harvesting Units.

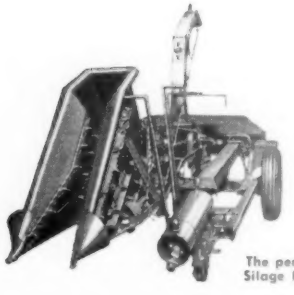
The Machine of Many Exclusive Features

The FOX has many special features not found in other forage harvesters. Twenty years of experience in manufacturing hay choppers — more than any other manufacturer now in the field — makes it possible to offer these exclusive features.



Handles Grass Silage Perfectly.

Check these important features



The perfect Corn Silage Harvester.

- Safety cutting principle — positively protects machine against damage by stones — foreign objects.
- Easily and accurately adjustable cutting bar.
- Quick-change Harvesting Units. Can be changed to Pick-up, Mower Bar or Corn Unit in less than 10 minutes.
- Perfect alignment of cutting mechanism assured by exclusive, all steel, one-piece frame construction.
- Large oversize tires.
- Quick-change knives.

SEND FOR YOUR FREE CATALOG

FOX RIVER TRACTOR COMPANY

The Pioneer of Modern Forage Harvesting

2513 North Rankin Street

APPLETON FOX WISCONSIN